

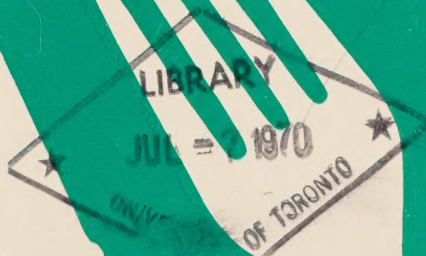


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EMERGENCY FEEDING MANUAL

Emergency Welfare Services Division

6-5

Published by authority of
the Honourable John Munro
Minister of National Health and Welfare

Canada

Joseph W. Willard

Deputy Minister of National Welfare

FOREWORD

This manual has been produced by the Emergency Welfare Services Division to provide information on the basic plans, policies and procedures involved in organizing the Emergency Feeding Service. It is intended for use as a guide in planning, organizing and staff training; and for the operation of the Service in an emergency.

As this service would have to be provided at the community level, the publication is designed primarily for the use of Chiefs and Supervisors of Emergency Feeding in reception communities.

We hope that it will prove useful to those responsible for the development of this important service in communities across Canada.

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PREFACE

This Manual replaces the previous TECHNICAL MANUAL ON EMERGENCY FEEDING IN CIVIL DEFENCE (first edition classified as Manual No. 25, second edition reprinted 1959).

The original material relating to equipment and staff has been retained. These data had been prepared for the previous Manual by a Committee including representatives of the Canadian Dietetic Association and the Canadian Restaurant Association. Their assistance is gratefully acknowledged.

Appreciation is extended also to Child and Maternal Health Division and to Emergency Health Services Division of the Department of National Health and Welfare for their co-operation in the preparation of the Chapters on Feeding Children in Emergency, Hospital Feeding in Emergency, Emergency Feeding Sanitation, and Appendices "L" and "M".

Tested recipes were provided by Nutrition Division, Department of National Health and Welfare, and by the Information and Consumer Service of the Department of Fisheries.



INTRODUCTION

In the event of an enemy attack there would be destruction of homes, stores, warehouses, and food processing plants, contamination of farm animals and crops by radioactive fallout, and disruption of public utilities and transportation facilities. Therefore, many people would need assistance in securing the necessities of life.

Emergency Welfare Services (EWS) planning and organizing for possible war emergencies within a community, enables that community to deal with the emergency welfare needs and problems which would arise from any natural disaster occurring in that community.

Feeding is only one of the EWS which would be required in emergency. It would be provided to those persons without food and or without means of preparing it in time of disaster.

In disaster, food is essential for sustaining life, counteracting shock, improving morale of victims, ensuring the capacity for sound decision making on the part of key personnel, and maintaining the efficiency of workers.

EMERGENCY WELFARE SERVICES ORGANIZATION

FUNCTIONS OF THE FIVE EMERGENCY WELFARE SERVICES

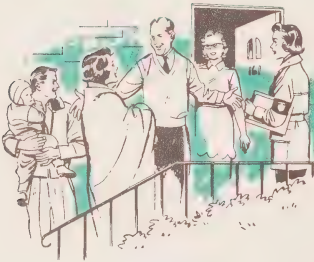
In a national emergency five EWS would meet basic needs of people in these ways:

Emergency Clothing Service



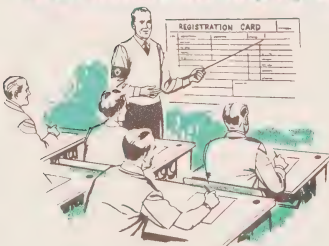
Clothing would be supplied to persons requiring it in three stages. Initially, emergency covering (a blanket or coat) might be required to provide adequate protection from the elements. As soon as possible people would be clothed in a manner which would permit them to work and care for themselves. When sufficient clothing stocks were available, there would be a return to the normal choice of type and size.

Emergency Lodging Service



Temporary emergency lodging would be provided for homeless people who had not made their own emergency lodging plans or who, if they had made plans, were unable to carry them out in the initial emergency period. They would be lodged in private dwellings, in commercial facilities, and in other buildings used as congregate lodgings.

Registration and Inquiry Service



Members of separated families would be united as quickly as possible and inquiries concerning the safety and whereabouts of missing persons would be answered.

Emergency Feeding Service



Evacuees and groups of people who had no food and/or no facilities to prepare their own meals would be fed.

Personal Services



Evacuees would be met at reception points. Unattached children and dependent adults separated from their families, would be cared for. The special needs of relocated welfare institutions would be looked after. Individual counselling would be given and material assistance would be made available to those in need.

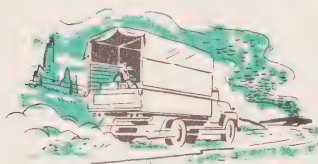
WELFARE CENTRE



A Welfare Centre is the basic EWS operational unit in a reception community. Each Centre services a given Welfare Centre Area. Evacuees arriving in reception communities would be directed to the Centres to receive the EWS they required.

A reception community divided into Welfare Centre Areas with a Welfare Centre in each, as well as other EWS installations, is illustrated above.

MOBILE EWS TEAMS



In addition to providing EWS in Welfare Centres, it would be necessary to take services to people by means of Mobile EWS Teams—either individual Service Teams or self-contained Welfare Centre Teams.

These teams would provide initial welfare services to people brought out of the damaged areas or fallout areas, taking care of their most urgent needs before they go to the nearest Welfare Centres. Complete Welfare Centre teams would set up and operate Welfare Centres where required. Others might assist Centres with a heavy workload.

Every Welfare Centre should be prepared to provide Mobile Teams.

GENERAL EWS PLANNING ASSUMPTIONS

EWS planning must be based on certain premises about a disaster and about human needs. These assumptions are:

- (1) That the emergency would occur under bad weather conditions.
- (2) That there would be some warning of possible attack on the country (it might be hours or minutes).
- (3) That there would be traffic control along evacuation routes.
- (4) That large numbers of people would need accommodation, food and clothing.
- (5) That evacuees suffering from shock would need individual attention.
- (6) That in a given group of 1,000 evacuees, 560 would be heads of families and single householders (440 dependents).¹

¹ Dominion Bureau of Statistics (DBS) figures.

- (7) That supporting municipal emergency services would be available.
- (8) That emergency orders and regulations would provide for price control and for the control and rationing of supplies.
- (9) That a monetary system, including banks, would continue to function in undamaged areas.

GOVERNMENT RESPONSIBILITY FOR EWS

The survival of the population in a nuclear war would be the responsibility of the three levels of government in Canada. Therefore, the peacetime development of EWS must also be a federal, provincial and municipal responsibility.

FEDERAL GOVERNMENT

The EWS Division, Department of National Health and Welfare is assigned emergency responsibilities both in peacetime and in wartime, as specified in the Order in Council P.C. 1965 — 1041.

Planning and Organizing Responsibilities

- (1) Developing and recommending basic EWS policies, plans and procedures which can be applied throughout Canada.
- (2) Providing EWS specialist courses for key EWS personnel at the Canadian Emergency Measures College.
- (3) Assisting provinces in planning and organizing their EWS programs, which includes assistance with inter-provincial planning and with training.
- (4) Developing and producing operational supplies and equipment such as mobile feeding units, mobile clothing units and operational forms.
- (5) Producing public educational materials, such as pamphlets and displays.
- (6) Producing training materials, such as precis, filmstrips and films.
- (7) Co-ordinating EWS federal plans with those of other government departments and agencies, and with voluntary agencies.
- (8) Co-ordinating EWS policies and procedures with those of the U.S.A.
- (9) Planning for the continuity of the Welfare Branch of the Department, and assisting provincial welfare departments with the planning for their continuity.

Operational Responsibilities

- (1) To give advice on request, to any province regarding the operation of EWS.
- (2) To obtain assistance from one province on behalf of another, when requested.
- (3) To continue the essential functions of the Welfare Branch of the Department.

PROVINCIAL GOVERNMENT

Provincial welfare departments have the responsibility and authority to plan and organize EWS in peacetime, and to operate them in wartime. They also have the responsibility for continuing welfare functions of the department.

Provincial EWS Director

In the field of planning and organizing, the provincial EWS Director, assisted by his Planning Committee, has these responsibilities:

- (1) Organizing EWS at province and zone levels. They may do this either by using existing resources and/or by creating new services.
- (2) Selecting a provincial Chief for each of the five EWS and zone EWS Directors (using government employees where possible), establishing lines of succession at least two deep and ensuring that all these persons get adequate training.
- (3) Assisting municipalities in organizing their EWS in conjunction with the zone EWS Director.
- (4) Developing and implementing a co-ordinated training program throughout the province.
- (5) Co-ordinating EWS plans with those of other government departments and agencies, and with voluntary agencies.
- (6) Preparing the provincial EWS plan.
- (7) Planning for the continuity of the provincial welfare department.

The operations functions of the provincial EWS Director would be:

- (1) To operate EWS from the emergency government site.
- (2) To determine EWS policy.
- (3) To interpret emergency orders, regulations and directives to zone EWS Directors.
- (4) To keep federal EWS informed regarding the provincial EWS situation.
- (5) To continue essential welfare programs.

Provincial Chief of Emergency Feeding

Under the direction of the provincial EWS Director, the provincial Chief of Emergency Feeding (EF), assisted by his Planning Committee, has several planning and organizing responsibilities. They are:

- (1) Advising on selection of zone Chiefs for the Service, establishing lines of succession at least two deep and ensuring that they receive adequate training.
- (2) Developing and maintaining a detailed provincial EF organizational and operational plan which co-ordinates the zone EF plans.
- (3) Co-ordinating plans and procedures with other EWS and emergency services, and with other departments and agencies from which the Service will require, and to which it will provide, operational support.
- (4) Stimulating, advising and assisting the zone Chiefs with the planning for and the organization of the Service in their zones and municipalities therein.
- (5) Preparing and conducting provincial EF courses and assisting with other training courses as required.
- (6) Developing and conducting training exercises for the Service.
- (7) Providing direction to the zones and municipalities in the conducting of EF surveys.
- (8) Advising the EWS Director regarding the positioning of Mobile Feeding Units, and ensuring their maintenance.
- (9) Maintaining records of the state of organization of the Service in zones and municipalities.
- (10) Assisting with the public information program.
- (11) Ensuring that all essential EF reference material and records of resources for operations are at the emergency government site.

Under the EWS Director, the operations functions of the provincial Chief of EF would be:

- (1) To control the overall operation of EF from the emergency government site.
- (2) To continually analyze the EF situation. This includes the consideration of problems in relation to resources (supplies, equipment, personnel).
- (3) To advise the EWS Director on the current situation, including the EF problems which arise.
- (4) To carry out instructions received from the EWS Director affecting the Service.
- (5) To make policy decisions regarding EF in the province.
- (6) To provide technical advice to other levels, as requested.

ZONE

Where zones have been created in a province, the zone EWS Director is the link between provincial and local governments.

Zone EWS Director

The zone EWS Director, assisted by his Planning Committee, has these peacetime responsibilities:

- (1) Selecting zone Chiefs, establishing lines of succession and ensuring that they receive adequate training.
 - (2) Encouraging municipal preparation throughout the zone. This includes assisting communities in planning and organizing their EWS.
 - (3) Co-ordinating the EWS plans of likely target areas and reception communities in the zone.
 - (4) Co-ordinating the resources of government departments and agencies with voluntary agencies in the zone.
 - (5) Preparing the written zone EWS plan.
 - (6) Co-ordinating zone EWS operational plans with those of other emergency services, and with the provincial EWS plan.
 - (7) Assisting with municipal training programs and exercises.
- The operations functions of the zone EWS Director would be:

- (1) To direct and co-ordinate EWS of municipalities in the zone.
- (2) To implement instructions received from the provincial EWS Director.
- (3) To keep the provincial EWS Director informed of the EWS situation within the zone.
- (4) To direct Mobile EWS Teams while in re-entry operations.
- (5) To preserve continuity of government within the zone.
- (6) To support essential on-going welfare programs.

Zone Chief of EF

Under direction of the zone EWS Director, the zone Chief of EF, assisted by his Planning Committee, has these planning and organizing responsibilities:

- (1) Developing and maintaining a detailed zone EF organization and operational plan which co-ordinates the municipal EF plans.

- (2) Stimulating, advising and assisting the municipal Chiefs with the planning for and the organization of the Service in their municipalities.
- (3) Initiating and assisting with training courses as required.
- (4) Assisting with training exercises for the Service.
- (5) Co-ordinating plans and procedures with other EWS and emergency services, and with other departments and agencies from which the Service will require, and to which it will provide, operational support.
- (6) Providing direction to the municipalities in the conducting of EF surveys.
- (7) Maintaining records of the state of organization of the Service in municipalities.
- (8) Ensuring that all essential EF reference material and records of resources for operations are at the zone emergency government site.

Under the EWS Director, the operations functions of the zone Chief of EF would be:

- (1) To control the overall operation of EF within the zone.
- (2) To direct municipalities in accordance with instructions received from the zone EWS Director or the provincial Chief of EF.
- (3) To provide technical advice to municipal Chiefs of EF as required.
- (4) To advise on the best use of supplies, equipment, and personnel within the zone.
- (5) To advise the zone EWS Director on the current situation including the EF problems which arise.
- (6) To assist unorganized communities or areas in the zone.

MUNICIPAL GOVERNMENT

Local communities would be responsible for providing EWS directly to victims of attack arriving in their area, and to others in need, including local inhabitants. Each municipality would appoint an EWS Director to organize and operate EWS at this level.

Municipal EWS Director

The EWS Director, assisted by his Planning Committee, has these peacetime responsibilities:

- (1) Making an EWS plan for the municipality.
- (2) Establishing Welfare Centre Area boundaries in co-operation with the municipal Co-ordinator.
- (3) Selecting Welfare Centres.

- (4) Selecting Chiefs of the five EWS, establishing lines of succession and ensuring that they receive adequate training.
- (5) Integrating public and private welfare resources within EWS.
- (6) Developing and implementing an EWS training program.
- (7) Co-ordinating EWS plans with those of other municipal emergency services in the community.
- (8) Co-ordinating the municipal EWS plan with the zone EWS plan.

In operations, the responsibilities of the EWS Director would be:

- (1) To direct and operate EWS in the municipality.
- (2) To arrange for supporting municipal emergency services as required.
- (3) To decide on priorities for use of EWS supplies, equipment and personnel within the municipality.
- (4) To keep the zone EWS Director informed regarding the EWS situation in the municipality.

Welfare Centre Manager

Each Welfare Centre is administered by a Manager who is directly responsible to the EWS Director. In some instances, the Manager would require the assistance of an Administrator.

The Manager has the following planning and organizing responsibilities:

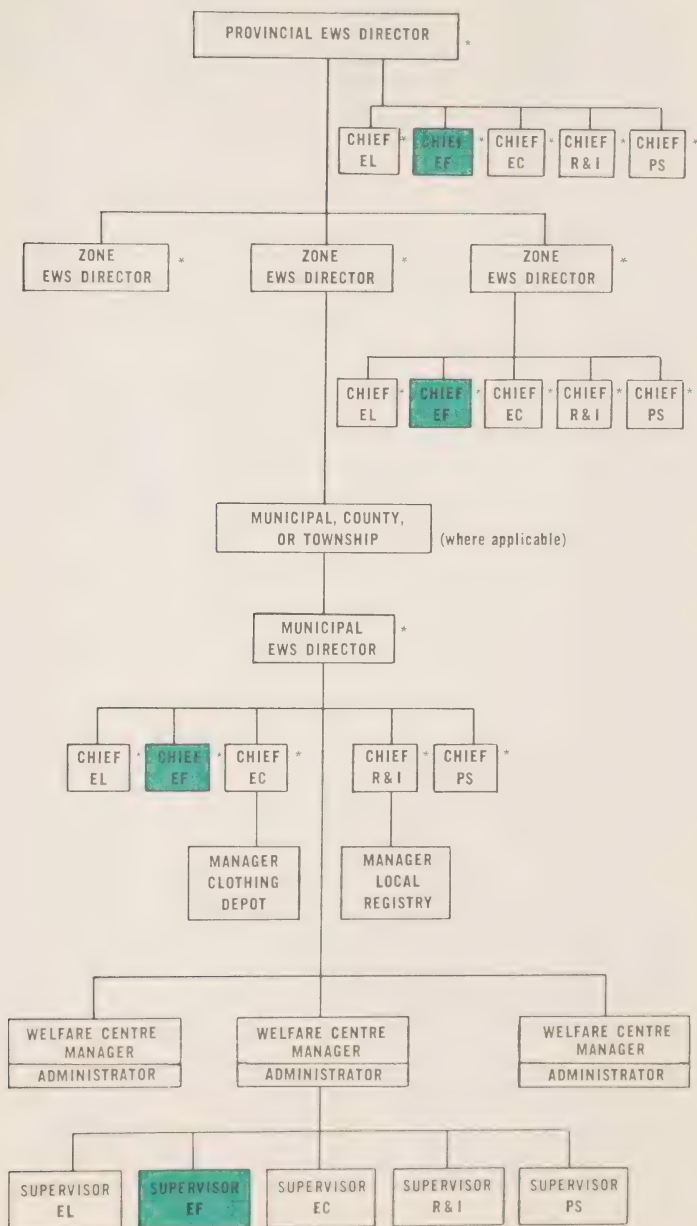
- (1) Preparing the administration and operations plan for his Welfare Centre and Welfare Centre Area, including the organizing of Mobile EWS Teams.
- (2) Establishing and maintaining liaison with other municipal emergency services in his Welfare Centre Area through the EWS Director.
- (3) Conducting periodic Welfare Centre exercises.

In operations, the Welfare Centre Manager would be responsible for setting up and operating the Welfare Centre and directing all EWS in the Welfare Centre Area. The Manager, upon instructions, would staff, equip and dispatch Mobile EWS Teams.

Responsibilities of the municipal EF Chief and Supervisors are dealt with in subsequent chapters.

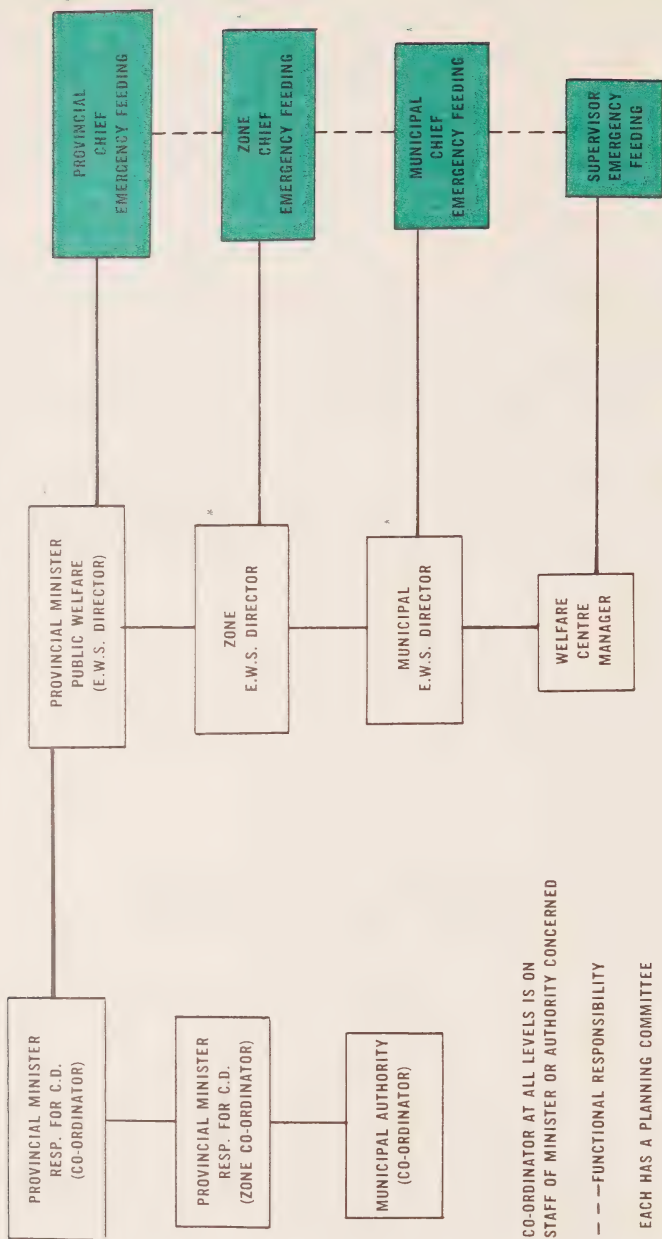
EMERGENCY WELFARE SERVICES ORGANIZATION

The following chart shows the key EWS positions at the Provincial, Zone and Municipal levels.



*Each has a Planning Committee

The following chart shows the suggested organizational structure for the operation of EF and the lines of authority.



CO-ORDINATOR AT ALL LEVELS IS ON STAFF OF MINISTER OR AUTHORITY CONCERNED

-- -- FUNCTIONAL RESPONSIBILITY

EACH HAS A PLANNING COMMITTEE

RESPONSIBILITY OF THE EMERGENCY FEEDING SERVICE

In an emergency some or all of the following groups might require feeding:

- (1) Evacuees upon arrival in reception communities (a hot drink or infant formula at Welfare Centres, and feeding in congregate lodgings).
- (2) People remaining in their homes in a slightly damaged area.
- (3) People rescued from a damaged area, before being sent to a Welfare Centre.
- (4) Regular inhabitants of reception communities in certain circumstances (e.g. disrupted utilities, food shortages, distribution or rationing problems).
- (5) Casualties and staff in Civilian Advanced Treatment Centres (ATCs).
- (6) Patients and staff in Emergency Hospitals.¹
- (7) Patients and staff in Emergency Clinics.
- (8) Personnel in Blood Shadow Depots.
- (9) Residents and staff of improvised welfare institutions.¹
- (10) Essential municipal emergency services workers on the job.²

The following categories of workers, however, would be fed by the EF Service:

- (a) Fire fighters, engineers and other workers in the damaged area during the time before the Army assumed control, as well as during the period after the Army had relinquished control to civilian authorities.
- (b) Essential workers in reception communities, such as wardens, police, firemen and EWS personnel if they were unable to leave their jobs. After the implementation of a shift system, they would eat in their homes or in their emergency lodgings.

¹ The EF Service would not be responsible for feeding in regular hospitals or in existing welfare institutions.

² The EF Service would not be responsible for feeding re-entry forces under the control of the Army in damaged areas.

ASSUMPTIONS FOR EMERGENCY FEEDING

In order to plan realistically, the following conditions which would affect the EF Service are assumed:

- (1) Food controls and rationing will be implemented as soon as possible.
- (2) As many evacuees as possible will eat in the homes in which they are lodged in reception communities.
- (3) Mass feeding might be required for a limited time for the total residents and evacuees of a reception community.

MOBILE EF TEAMS

In addition to emergency feeding in static locations within a Welfare Centre Area, every Welfare Centre should be prepared to send Mobile EF Teams where directed. Personnel should be earmarked for this purpose. The likely places of need would be in re-entry-areas, and at decontamination points outside heavy fallout areas. The teams would come under the operations control of the Army, zone or municipality where they were sent.

A team should be capable of feeding 500 persons within a two to four hour period and operating continuously at this rate if required. The rate at which the team could operate would depend upon the type of food provided (a hot drink or a one-dish meal). The team must transport sufficient equipment, fuel, and food supplies for the initial feeding of 500 persons. If zone indicates that safe water is not available at the site of operation, it would be necessary to carry water as well.

For the number of workers required for a Mobile EF Team, see Appendix "E".



EMERGENCY FEEDING ORGANIZATION

If emergency feeding is to go into operation immediately it is required, planning and organizing must be done in peacetime.

The following outline will serve as a guide for the organization of the EF Service in a reception community.

(See also municipal organization portion of Chart in Chapter I).

BASIC ORGANIZATION

Before a Chief of EF is appointed there must be:

- A municipal Co-ordinator
- A basic municipal civil emergency plan
- An EWS Director
- An EWS Planning Committee.

CHIEF OF EF

The appointment of a Chief of EF would be made by the EWS Director. At an early stage a Deputy Chief should also be appointed.

Qualifications

The Chief and Deputy should have the following qualifications:

- (1) A practical knowledge of quantity feeding.
- (2) A knowledge of the community.
- (3) Initiative.
- (4) Ability to organize and delegate work.
- (5) Leadership qualities with the ability to work with persons and groups.

Training

Regardless of their previous professional training and experience, the Chief and Deputy will need further training to enable them to do their job effectively. This should include basic training in civil emergency planning and EWS training, and a federal or a provincial EF specialist course.

Responsibilities

Their overall responsibilities would include:

- (1) Conducting EF surveys.
- (2) Developing an EF plan to suit the needs of the community in disaster.
- (3) Selecting and training staff.
- (4) Establishing and maintaining workable plans and relationships with other municipal emergency services.
- (5) Controlling the operation of the EF Service at Municipal Emergency Government Headquarters (Headquarters), during the emergency period.

PLANNING COMMITTEE

Composition

To assist with the detailed planning required, the Chief should select a small group of appropriate community people. The Committee should consist of people who have experience in various aspects of feeding, such as:

- (1) Restaurateurs.
- (2) Dietitians, Home Economists, Nutritionists.
- (3) Food supervisors in institutions, schools, colleges, department stores, industry, or catering establishments.
- (4) Representatives from voluntary organizations which are involved in peacetime feeding, for example church groups, national organizations.

Other appropriate people or small working groups could participate in certain phases of planning (e.g. food supply, improvised outdoor feeding.)

Functions

The Planning Committee would assist the Chief in the following ways:

- (1) Carrying out EF surveys.
- (2) Developing the EF Service.
- (3) Preparing the EF operational plan.
- (4) Making a continuing assessment of the problems likely to be faced.

EF SUPERVISORS

Each Welfare Centre requires a Supervisor (and Deputy) who would be administratively responsible to the Welfare Centre Manager and functionally responsible to the Chief of EF at Headquarters.

Depending on the size of the anticipated job, assistants may be required for various aspects of the work within the Welfare Centre Area.

Qualifications

An EF Supervisor should have:

- (1) A practical knowledge of quantity feeding.
- (2) A knowledge of the community.
- (3) Ability to organize and delegate work.
- (4) Leadership qualities.
- (5) Ability to work with people under stress.

Training

A Supervisor's training should include basic civil emergency planning and EWS orientation, and a federal or a provincial EF specialist course.

Responsibilities

The overall responsibilities of a Supervisor would include:

- (1) Providing specific information regarding the space, equipment, supplies, and staff required by the EF Service in the Welfare Centre.
- (2) Deciding on the best use of existing feeding establishments within the Welfare Centre Area to meet the requirements within that particular Welfare Centre Area.
- (3) Assisting with the training of EF workers.
- (4) Operating and administering all the EF activities within the Welfare Centre Area.

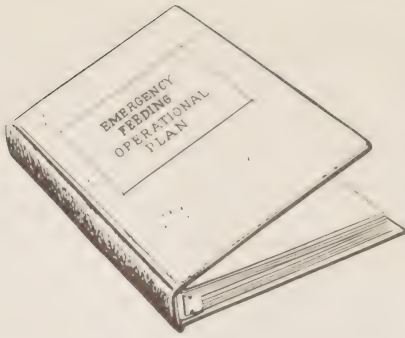
SELECTING AND TRAINING WORKERS

The Chief and Supervisors would determine the total staff requirements to carry out the designated feeding job for the reception community.

Only key workers need to be recruited and trained prior to an emergency. Other workers such as kitchen helpers, servers, and dishwashers who do not require special training, could be recruited at the time of an emergency and briefed regarding their duties.

After workers have been trained, it is desirable that they be assigned for duty in the particular Welfare Centre Area where they live. On an Alert, they could report quickly to their designated Welfare Centre.

A suggested timetable for a 20-hour local EF course for workers is attached as Appendix "A".



STEPS IN EMERGENCY FEEDING PLANNING

Plans for the EF Service should be developed by the EF Chief and his Planning Committee, in consultation with the EWS Director. The EF plan must meet the particular needs of the community in relation to the number, composition and needs of the probable evacuees assigned to it.

The main problems to be faced in planning for emergency feeding are:

- (1) The large numbers which may have to be fed.
- (2) The need for various types of food service in many locations, requiring the transportation of prepared food in some situations.
- (3) The feeding of special groups including infants, the ill, and workers.
- (4) Uncertain food supplies.
- (5) Disrupted utilities.
- (6) Maintenance of sanitary practices.
- (7) The need for extra workers, many of whom will require training.

GUIDELINES FOR EF PLANNING AND ORGANIZATION

EF planning and the EF organization should be developed systematically. The following steps are suggested:

- (1) Appointing an EF Chief and selecting an EF Planning Committee.
- (2) Contacting establishments to be surveyed (See Chapter V).
- (3) Conducting EF surveys (See Chapter V).
- (4) Compiling the survey data for permanent records.

- (5) Appointing an EF Supervisor for each Welfare Centre as soon as Welfare Centre Areas have been established and when buildings have been selected.
- (6) Deciding on EF requirements in each Welfare Centre (space, supplies, equipment, staff).
- (7) Finalizing arrangements for getting the Welfare Centre equipment and supplies when required, by planning with the municipal emergency services concerned (e.g. Transportation, Engineers, Supply).
- (8) Assessing the total EF needs and deciding on the best use of existing EF resources within each Welfare Centre Area to meet the requirements of the evacuees being planned for, the anticipated needs of congregate lodgings, Emergency Hospitals, Mobile Teams and other EF responsibilities. The survey data would be used in making these decisions (See Chapter V).
- (9) Designating feeding establishments for specific operational use. These would be listed in the written EF plan.
- (10) Determining the additional equipment and supplies (if required) which these designated feeding establishments would need to do the job assigned to them.
- (11) Finalizing arrangements to obtain the necessary supplies and equipment for feeding establishments when needed, by planning with municipal emergency services.
- (12) Determining extra staff (if required) which the feeding establishments concerned would need to carry out their operational job.
- (13) Finalizing plans for the emergency use of existing feeding establishments, with the owners involved.
- (14) Ear-marking additional space in the community suitable for emergency feeding, in case of need (vacant buildings, outdoor sites).
- (15) Selecting and training workers (See Appendix "A").
- (16) Establishing lines of succession for key staff.
- (17) Preparing a written EF operational plan.
- (18) Assisting with a public information program.
- (19) Assembling EF reference material and records of resources for operations at Headquarters.
- (20) Conducting EF exercises.

THE EF PLAN

No plan can do more than to provide for meeting a theoretical situation. When an actual emergency occurs, plans often need quick and drastic modification.

The EF plan should stand on its own but will form part of the EWS plan. The EWS plan will be included in the complete municipal civil emergency plan for the community.

The EF plan should be:

- written
- simple, clear and concise
- compiled in a useable form
- flexible and capable of adaptation to current conditions
- kept up to date, reflecting changes in policy and procedures.

The plan must be approved by the EWS Director. Copies should be available for the EWS Director, the EF Chief, and each EF Supervisor.

A plan usually consists of a main body with basic data, and Annexes or Appendices containing data which may require frequent revision (e.g. lists of names and addresses, maps).

Main Body

The following information is suggested for inclusion in the main body of the EF plan:

- (1) Organization chart(s) showing positions and lines of authority. Included could be a chart showing the relationship of EF with the overall municipal EWS organization, and one showing the operational lines for EF at the three levels of government.
- (2) Overall responsibilities of the EF Service (including anticipated numbers where possible, such as the number of evacuees being planned for, capacity and number of staff of Emergency Hospitals and Civilian ATCs).
- (3) Basic policies of operation (e.g. hot drink and infant formula at Welfare Centres, two emergency type meals for those being fed by the EF Service, three standard infant formulas).
- (4) Responsibilities of Chief.
- (5) Overall responsibilities of Welfare Centre Managers.
- (6) Responsibilities of Supervisors.
- (7) Warning chart, and system for alerting and mobilizing staff and workers.
- (8) Means of communication between:
 - Chief at Headquarters and Supervisors at Welfare Centres
 - Supervisors at Welfare Centres and EF establishments within the Welfare Centre Area (e.g. restaurants, churches, hotels)
 - Municipal Chief and zone Chief.

(9) Operating procedures for:

- obtaining support from municipal emergency services (e.g. through Headquarters)
- obtaining supplies and equipment (e.g. from WSA and/or local stores)
- obtaining extra workers if required (e.g. untrained workers through National Manpower Authority (NMA), additional trained workers through EF Chief at Headquarters).

Annexes or Appendices

- (1) Name, address, telephone number, and lines of succession of staff (EWS Director, EF Chief, EF Supervisors).
- (2) An up-to-date list of all trained workers, with addresses and telephone numbers.
- (3) Survey data on existing feeding establishments and other essential EF resources.
- (4) Identity of those existing feeding establishments and organizations which have been assigned a specific responsibility (e.g. Restaurant “A” will provide food for the Emergency Hospital located in Building “B”).
- (5) Operational plan for each Welfare Centre, including:
 - diagram of the layout of the EF area
 - equipment required
 - supplies required
 - workers required, including those for Mobile EF Teams.
- (6) Job descriptions for workers.
- (7) Map of the community showing:
 - Welfare Centre Areas
 - Welfare Centres
 - Number of evacuees assigned to each Welfare Centre Area
 - Headquarters
 - Pre-determined locations of any Emergency Hospital, congregate lodging facilities, evacuated welfare institutions for which EF has a supporting responsibility.

EXERCISES

After the plan has been written and after workers have been recruited and trained, the next step is that of testing plans and procedures and the workers’ performance.

This can be done by a series of exercises. The first ones should be paper exercises. These can be followed by progressively larger and more complicated ones involving more Services. For example, exercises involving:

- the EF Service only in one Welfare Centre, then in the whole community
- all five EWS in one Welfare Centre, then in the whole community
- all municipal emergency services in a Welfare Centre Area, then in the whole community
- the general public.

Each exercise should be carefully assessed afterwards to correct operational deficiencies. The written plan should be revised as required.



SURVEY OF LOCAL FEEDING RESOURCES

In order to plan for the operation of the EF Service, detailed information regarding quantity, type, location and availability of certain local resources would be essential.

These resources fall into three broad groups:

- (1) Food supply.
- (2) Existing feeding establishments.
- (3) Feeding equipment.

The peacetime planning for all types of supplies for emergency use is the responsibility of the Emergency Supply Planning Branch (ESPB) of the Department of Defence Production. In time of emergency this organization would be absorbed by the War Supplies Agency (WSA).

ESPB has indicated that stocks in warehouses, wholesale and retail establishments would come under the control of the WSA and would be released only on WSA authority in such amounts as would be practicable according to local conditions.

CO-ORDINATION OF SUPPLY INFORMATION

The EWS organization initially should estimate its requirements for food, heating and cooking fuels, equipment and other supplies. Requests for information concerning the availability of supplies to meet these requirements should be directed to the ESPB Regional Director. Where it is considered necessary to undertake surveys of retail stocks of essential supply items and a Municipal Emergency Supply Officer has not been appointed, the EWS may undertake such surveys. Otherwise, such information should be requested from that Officer. Data obtained by EWS by means of local surveys must be made available to the Municipal Emergency Supply Officer when appointed, and the ESPB Regional Director.

CONDUCTING EF SURVEYS

In the absence of specific information the EF Service should conduct surveys of all available retail supplies and equipment essential to its operation. The Chief of EF has the overall responsibility but would be assisted by members of the EF Planning Committee.

Individual members of the Planning Committee could direct the necessary surveys in specific areas of their community. All survey workers should be briefed by the Chief concerning a common approach and the details to be recorded.

The proposed surveys must be cleared with municipal authorities. Also, the ESPB Regional Director or zone officer must know that they are to be conducted. Each person or establishment to be contacted must be fore-warned of the anticipated visit and know the purpose of the survey. This information could be conveyed by a form letter signed by a municipal authority.

It is not always necessary for survey workers to obtain and record the information. Instead, survey forms could be left with the owner or manager to complete from his records and inventories. He must be assured that the confidentiality of certain information will be preserved.

All community surveys should be co-ordinated. If another EWS besides the EF Service requires information for its own purposes from the same source it should, whenever possible, be obtained at the same time.

The collected data should be tabulated, collated as required, and retained at Headquarters for records of resources for operations when needed.

FOOD SUPPLY

A sample of a suggested form for surveying food stocks in retail outlets is attached as Appendix "B".

Separate returns for each location of the firm (main establishment, branch or associate stores, and warehouses) should be completed, with the location designated on the form.

The completion of four copies of the form is suggested in order that EWS and ESPB may have sufficient copies for the authorities concerned.

FEEDING ESTABLISHMENTS

A suggested form for obtaining the essential information about existing feeding establishments is attached as Appendix "C".

Much of the data included in this form, including the number, type, capacity, and condition of equipment can be completed by the operator of the feeding establishment. The completed form can be checked by the survey worker to ensure that all details are included.

The information from these forms will enable the Chief and the Planning Committee to determine the best use of the establishment when preparing the EF plan.

FEEDING EQUIPMENT

The location of equipment suitable for large quantity food preparation, currently held by feeding establishment operators, should be recorded in the EF plan. Examples are insulated food and beverage containers, milk cans, wash boilers, wash tubs, large stock pots, pails, portable stoves.

OTHER EF SUPPLIES

Anticipated requirements of fuel and other essential supplies (e.g. disposable eating utensils, soft drink and beer bottles, nipples, empty oil drums, brick and concrete blocks, sheet metal) should be made known to the municipal emergency supply officer and recorded in the EF plan.



SPACE, EQUIPMENT AND SUPPLIES REQUIRED FOR OPERATION OF EMERGENCY FEEDING

The requirements for space, equipment and supplies will vary under different circumstances. However, these requirements should be considered for the three locations of the EF Service in the community, i.e.

- at Headquarters
- at Welfare Centres
- at other EF installations.

AT HEADQUARTERS

Space

Space would be allotted to EWS according to the overall space available for the entire Headquarters operation.

Equipment

Standard office equipment would be required as well as special equipment, including a map board, transparent overlays, grease pencils, a resources board, message forms and log sheets.

Reference Material

The Chief must have essential reference material including a copy of the EF plan and the EF Manual, as well as records of other EF resources which are not included in the plan.

Space, Equipment and Supplies For Feeding Headquarters Staff

Adequate space and equipment must be arranged in the Headquarters building to feed the staff who cannot leave the

Headquarters during operations. When a shift system is arranged, staff would normally eat in their homes.

Many buildings chosen for Headquarters will already have kitchen space and cooking equipment. If there is to be a protected site, feeding arrangements for this area must also be planned for in peacetime. This may require improvisation. For example, simple cooking equipment and improvised serving counters may be necessary. These arrangements should be specified in the EF plan.

It is recommended that sufficient food for 14 days be procured and maintained in Headquarters in reception communities. In order to ensure fresh stocks, the food could be rotated regularly through existing provincial or municipal users, such as institutions, or through exercises.

AT WELFARE CENTRES

Space

Space would be required for both food preparation and food service. If there was an existing kitchen in the building(s) chosen for a Welfare Centre, this area would be used for preparation. If there were no kitchen facilities, approximately 150 to 200 square feet of space would be required for an improvised kitchen. If this arrangement is not convenient, beverages and infant formula could be prepared in existing feeding establishments or in surrounding homes and delivered to the Welfare Centre as required.

A serving area should be set up in the reception room of the Welfare Centre, preferably near an area where people can sit down. Space requirements would be approximately 50 to 60 square feet for a simple counter arrangement.

Equipment

For Beverage Preparation

Stoves or hot plates	6 burners
Work table	1
Covered pots (5 or 6 gallon capacity)	6
Measuring cup	1
Dippers	2
Can openers	2
Covered garbage cans	2
Refrigerator	If possible

For Beverage Service

Serving tables	2
Jugs	6
Ladles	4
Disposable cups	As required
Covered garbage cans	2
Containers (for depositing used cups)	As required

For Dishwashing

Sinks	3
or	
An improvised dishwashing arrangement including:	
Work table	1
Large tubs	3
Perforated pails or mesh baskets with handles	2

Supplies

For Beverage (For 2,000)

Coffee (regular)	50 lbs.
or	
Instant Coffee	10 lbs.
or	
Tea	10 lbs.
Milk	10 gallons
or	
Evaporated Milk	60 cans (16 oz. size)
Sugar	30 lbs.

For Cleaning

Pails, mops, scrub brushes, broom, dust pan, cloths, soap, detergent, dish sterilizing compound and paper towels would be required.

Note:

Details on space, equipment and supplies in other EF installations in the Welfare Centre Area are included in subsequent Chapters.



THE EMERGENCY FEEDING SERVICE IN OPERATION

Basic policies and procedures for the operation of the EF Service must be determined in advance. There would be no time to make such decisions after the emergency occurred. The following policies are recommended:

BASIC POLICIES OF OPERATION

- (1) Food service in an emergency must be simple and streamlined to essentials only.
- (2) Except in cases of extreme need, evacuees arriving in reception communities will receive a hot drink only at Welfare Centres.
- (3) The EF Service will provide two emergency type meals per day.
- (4) Standard infant formulas will be prepared until this can be done by the mothers themselves.
- (5) Existing feeding establishments, commercial and non-commercial, will be used as much as possible for emergency feeding.
- (6) Improvised feeding facilities will be employed if existing establishments cannot be used because of disrupted utilities, or if they cannot cope with the large numbers to be fed.
- (7) Mobile feeding will be required for some groups.

THE EF SERVICE IN OPERATION

Alerting

At the time of a national Alert, EF workers would be alerted by the established warning system for that community (e.g. a "fan out" system). A system which did not rely solely on the use of telephones would be advisable.

Mobilizing

After being alerted, workers would mobilize. The Chief of EF would go to Headquarters. EF Supervisors would go to their designated Welfare Centres and report to their respective Welfare Centre Managers. The workers would report to the Welfare Centre to which they had been assigned. In some cases, workers might go directly to other previously designated sites of operation (e.g. an improvised institution or a congregate lodging facility). EF workers from target areas would report to a Welfare Centre in the reception community where they arrive.

OPERATIONS IN RELATION TO THE THREE TIME PHASES

Although it is difficult to forecast a definite time span for the total EF operation, the demands on the Service in reception areas would vary in the three phases — Pre-Attack, Shock, and Recovery. (See Appendix "V" — EWS Glossary of Terms).

EF activities at the three operational sites — at Headquarters, at Welfare Centres and within the Welfare Centre Area — can be generally outlined as follows:

Headquarters

Pre-Attack

In this phase the Chief would be responsible for making all necessary preparations. He would assemble resource and reference material, review plans, and determine the readiness of the staff organization. If Headquarters is manned during this phase, the allotted space would be set up with the necessary equipment, supplies, reference material and records of resources needed for the operation of the Service. A message log must be available to record all in-coming and out-going action messages. (See Appendix "D"). A resources board or some other method will be required to keep an account of the availability and disposition of EF resources (feeding establishments, equipment, staff).

In order to provide for 24 hour operation at Headquarters, a shift system will be required. At no time should the Chief leave his post without designating authority to a deputy.

Very few messages to or from zone Headquarters could be expected during this phase.

Shock Phase

The Chief would be kept informed on the state of manning and readiness in Welfare Centres through situation reports (SITREPS) received. Information would be available from zone Headquarters indicating the probable numbers and time of arrival of evacuees.

The EWS Director would specify times for SITREPS to be submitted by the Chief. They would include a general evaluation of the EF situation as well as information on the extent to which EF facilities were in use. SITREPS, combining all EWS information, would be prepared by the EWS Director for forwarding to zone Headquarters.

During the early stages of the shock phase, the Chief would be concerned primarily with adjusting the allocation of staff to meet the demands for the Service at Welfare Centres and processing requisitions for food and equipment.

Requests for Mobile EF Teams to go forward to damaged areas, to Civilian ATCs and to communities where the EF Service had not been organized, could be received from zone Headquarters. The Chief would decide which Welfare Centre(s) could provide Teams and advise the EWS Director.

Problems would increase in scope and become more complex as the shock phase progressed. Unplanned congregate lodging facilities and improvised welfare institutions might have to be established, supply problems would make the operation of Welfare Centres and feeding establishments more difficult and decisions on priorities would need to be made. Contacts with Welfare Centres and zone Headquarters would be more numerous involving requests for staff, supplies and information.

Recovery Phase

Following the shock phase there would be a shift to rehabilitative services. Group feeding programs which had been implemented would be gradually discontinued and people would become responsible for their own feeding.

The EF Chief would participate in policy decisions regarding the changeover and would instruct Supervisors to discontinue certain operations.

Welfare Centres

Pre-Attack

The Supervisors would prepare resource and reference material for use, review plans and determine the readiness of the staff organization.

Shock Phase

The first feeding requirements would be encountered as soon as evacuees start arriving at Welfare Centres. The EF area in Welfare Centres would have been set up according to previous plans, and essential equipment and supplies would be in readiness. The Supervisor would ascertain the number of workers who had reported for duty and notify the Chief at Headquarters. Hot drinks and infant formulas would need to be ready for the arrival of the first evacuees.

Mobile EF Teams would be sent to damaged areas and to other reception communities as directed.

As this phase continued there would be a lessened demand for feeding in Welfare Centres because rescue operations would be terminated and earlier evacuees would be lodged in private homes. Staff would be adjusted according to the need.

Recovery Phase

Feeding in Welfare Centres would be gradually discontinued. If still required for any reason, it could be maintained in fewer Welfare Centres in the community.

Within Welfare Centre Areas

Pre-Attack

EF establishments which had been designated a specific role in the EF plan would be made ready for operations and would await further instructions from the EF Supervisor of the Welfare Centre Area in which they were located.

Shock Phase

The operator in charge of each feeding establishment designated a role in the EF plan would obtain the food, supplementary equipment and other supplies needed for operation, through the Supervisor.

Group feeding would be carried out as required for congregate lodging facilities, improvised welfare institutions, Emergency Hospitals, Emergency Clinics and essential municipal emergency services workers on the job.

Meals would be provided for these groups, either by the use of feeding facilities within the premises, or if they were non-existent or inadequate, prepared food could be sent in from an existing feeding establishment. In some congregate facilities the evacuees could prepare and serve their own meals, under the leadership of a member of the group or an EF worker.

Some feeding establishments might send prepared food forward to damaged areas and to Civilian ATCs if sufficient Mobile Teams were not available. If the need for group feeding became excessive, improvised feeding facilities might have to be established.

Recovery Phase

As people were able to care for themselves, emergency feeding operations would taper off. The EF Service would be available for Emergency Hospitals and Emergency Clinics as long as they continued to function in a reception community. Improvised welfare institutions would remain in a community for an extended period if the area from which they had evacuated had been struck.

Some group feeding might still be required for certain congregate facilities which had not been relocated.

STAFF DUTIES AND ACTIVITIES IN OPERATIONS

Successful operation of the EF Service depends on a clear understanding of the duties of staff and workers. A description of each follows:

EF CHIEF AT HEADQUARTERS¹

Under the direction of the EWS Director, the Chief would:

- (1) Direct EF operations in the community.
- (2) Make policy decisions affecting the EF Service.
- (3) Decide on priorities for equipment, supplies, and staff.
- (4) Request extra equipment, supplies, and staff from zone if required.
- (5) Request assistance from supporting municipal emergency services (through the EWS Director).
- (6) Collate EF requisitions from Supervisors. Requisitions for supplies (written or verbal) normally will originate with the Supervisor. They will be communicated to the EWS Director who will approve or revise the requisitions and submit them to the supply officer.
- (7) Answer in-coming messages.
- (8) Maintain an EF message log showing clearly, at any time, the action taken on each message. It should also indicate messages which had not yet been handled.
- (9) Maintain an up-to-date visual record of the current EF situation by means of a resources board or other means. It should show the numbers being fed, EF resources committed to use, and the remaining resources.
- (10) Continually analyze the EF situation and prepare situation reports for the EWS Director for the information of zone Headquarters.
- (11) Give advice to EF Supervisors as required.
- (12) Request advice from zone if required.

EF SUPERVISOR AT WELFARE CENTRE

The Supervisor would:

- (1) Direct EF operations within the Welfare Centre Area and maintain contact with all EF establishments and sites therein.

¹ Provincial and zone Chiefs of EF carry out similar Headquarters duties at their respective sites, but related specifically to their own administrative levels.

- (2) Set up and operate the EF area in the Welfare Centre building.
- (3) Implement policies, procedures, and changes in plans as directed by the Chief.
- (4) Request additional equipment, supplies and staff as required.
- (5) Plan menus.
- (6) Prepare work schedules.
- (7) Supervise workers.
- (8) Collate orders submitted by the persons in charge of individual EF establishments (owner, manager, cook) within the Welfare Centre Area, and send to Headquarters.
- (9) Ensure that sanitary and safe working conditions are maintained in all EF areas.¹
- (10) Maintain records as required, including a record of all communications to Headquarters.
- (11) Continually analyze the situation and report to the Chief at Headquarters, through the Welfare Centre Manager.

An Assistant Supervisor may or may not be required, depending on the anticipated size of the feeding job within the Welfare Centre Area. An assistant might be assigned to one particular aspect of the work, such as improvised outdoor feeding.

WORKERS' DUTIES

Existing feeding establishments converted to emergency use would, as far as possible, use their own permanent staff. In such cases job descriptions for workers would already exist and would continue to be followed.

However, when improvised feeding facilities must be set up, the following list of duties will serve as a guide.

Cooks' Duties

Cooks would:

- (1) Arrange work space for efficient operation.
- (2) Follow work schedules and assign specific duties.
- (3) Prepare food and schedule its preparation for serving time.
- (4) Ensure proper storage of food supplies.
- (5) Plan and assign equipment and food ingredients.

¹ For precautions concerning radioactive contamination, see Appendix "N".

- (6) Keep close watch for spoiled or contaminated food, and consult with Supervisor regarding proper disposal action.
- (7) Ensure sanitary standards in food preparation areas and in storage areas.

Cooks' Assistants' Duties

- (1) Assist cooks in their duties.
- (2) Prepare vegetables as required.
- (3) Portion food into containers if transportation to other locations is required.

Kitchen Helpers' Duties

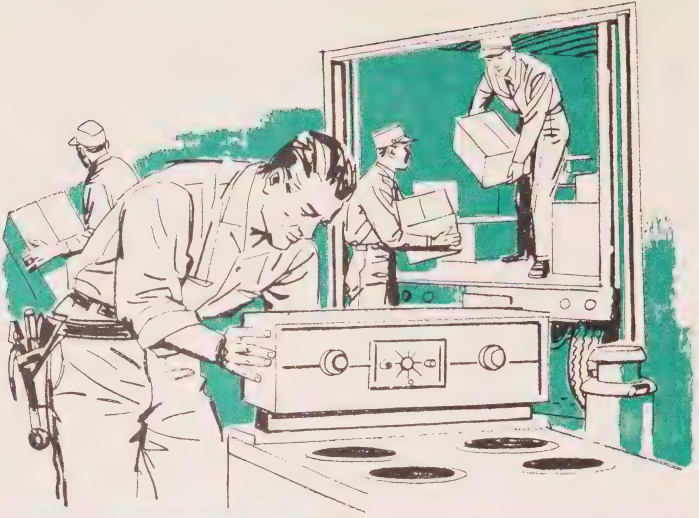
- (1) Maintain fires and ensure an adequate supply of hot water.
- (2) Open supplies.
- (3) Wash pots, and containers used for transporting food.
- (4) Deliver food to service counters.
- (5) Clean food preparation area and storage areas, counters, equipment and floors.

Food Servers' Duties

- (1) Set up service counter for efficiency.
- (2) Assemble serving utensils, eating equipment, and accompaniments (milk, sugar, salt, pepper) and place them at convenient locations on the counter.
- (3) Define size of portion to be served.
- (4) Set up garbage disposal locations in the eating area.
- (5) Serve people as they go through the line.
- (6) Keep the food preparation workers informed of food requirements.
- (7) Keep serving area neat and clean during period of service.
- (8) After completion of serving:
 - clear the serving counter
 - transfer left-over food to kitchen area
 - dispose of trash from serving area
 - clean counters, equipment, and floor in serving area.

Dishwashers' and General Cleaners' Duties

- (1) Set up hand washing facilities as required.
- (2) Wash all eating equipment.
- (3) Maintain cleanliness in dishwashing area, and assist with other cleaning requirements as duties allow.
- (4) Dispose of garbage, and clean and sterilize garbage containers.



ASSISTANCE REQUIRED BY EMERGENCY FEEDING SERVICE FOR OPERATION

The EF Service cannot function alone. It is so closely dependent on other Services—both EWS and other municipal emergency services—that effective co-ordination must be planned for now and must continue during operation.

SUPPORT FROM EWS

The following support from other EWS would be required:

Emergency Lodging

- (1) Allocation of space for Feeding Stations.
- (2) Allocation of additional space if mass feeding should become necessary.

SUPPORT FROM OTHER MUNICIPAL EMERGENCY SERVICES

The following support from other municipal emergency services would be required:

Transportation

- (1) Preplanned withdrawal of essential feeding equipment from probable target areas to reception communities (time permitting).

- (2) Movement of EF workers, equipment and supplies within reception communities, and to other locations where needed (e.g. Mobile EF Teams to damaged areas).
- (3) Transportation of prepared food within reception communities and to other locations where needed. (e.g. to Civilian ATCs).

Health Services

- (1) Advice on the bacteriological and radiological safety of milk, water and food supplies.
- (2) Advice on the maintenance of sanitary standards in improvised and existing feeding establishments and in congregate lodging facilities where feeding is provided.

Engineering

- (1) Installation of cooking equipment in improvised kitchens.
- (2) Repair and maintenance of cooking equipment.
- (3) Construction of improvised sanitary facilities.
- (4) Assistance in the building of outdoor improvised cooking facilities.
- (5) Repair of disrupted utilities (water, power, gas lines).
- (6) Provision of safe water.

Fire

- (1) Assistance in the selection of buildings or areas for improvised outdoor or indoor feeding.
- (2) Fire inspection and prevention in improvised and existing feeding establishments.

Communications

- (1) Between Welfare Centres and Headquarters.
- (2) Between Welfare Centres and all operational EF locations.

Personnel

- (1) Provision of extra workers as required.

Supply

- (1) Food.
- (2) Fuel.
- (3) Auxiliary feeding equipment.
- (4) Miscellaneous supplies.

Police

- (1) Maintenance of order in mass feeding centres.
- (2) Protection of food supplies.

Warden

- (1) Provision of information to householders regarding self-help EF preparations.

INDOOR FEEDING

In planning for emergency feeding in a reception community, the first facilities to consider are the already existing ones. They usually require only slight modification for emergency purposes.

Indoor feeding could take place in:

- (1) Existing facilities (e.g. restaurants, cafeterias, clubs, hotels, schools, church halls).
- (2) Improvised indoor facilities using vacant buildings.

Whenever possible heavy food production should continue in its normal location. This contributes to more economical use of supplies, equipment, workers, and transport.

Small establishments may be used for lighter food production as required, for such purposes as the preparation of beverages for Welfare Centres, soup for Emergency Hospitals, supplementary food for workers.

Existing feeding establishments may be used in three different ways depending on their layout, size and location, as follows:

(1) *Food Prepared and Meals Served*

These functions can be continued when both preparation and service facilities are adequate for large numbers of people (e.g. large restaurants, hotels, cafeterias, institutional dining halls.)

(2) *Auxiliary Kitchen*

Many small or isolated establishments such as snack bars, diners, country clubs, and "drive-ins" which normally cannot handle large crowds could, if necessary, prepare substantial quantities of food for service elsewhere.

In some communities, other cooking facilities may be found in factories and plants with large vats and ovens. These would be used only if not needed for industrial purposes during the emergency.

(3) *Feeding Station*

Arenas, large public halls and other buildings with space for line feeding could be used to serve food which had been prepared in Auxiliary Kitchens.

Layout and Traffic Flow

In existing establishments where both food preparation and service are possible, the following procedures may be used for conversion to emergency use:

- (1) Table-type service should be converted into a cafeteria style set-up.
- (2) Several traffic lines should be arranged.
- (3) Directional signs should be posted inside.
- (4) Traffic flow should be directed from entrance to exit by
 - diverting people to a separate exit if possible. This eliminates two-way traffic at the entrance. If a separate exit does not exist, rope barriers may be used to control traffic.
 - In some table-style establishments, traffic flow can be directed through the kitchen. There, food can be served from steam-tables, other tables, or directly from the stoves.
- (5) The eating area should be expanded if possible by using other areas of the building.

Equipment

If public utilities are disrupted, one or more of the following steps could be taken:

- (1) Any available emergency or stand-by cooking equipment could be put into operation by
 - converting stoves that burn natural gas to operate on bottled gas
 - installing stoves using bottled gas
 - connecting steam powered equipment to available portable steam generators or by piping steam from an emergency source
 - using wood or coal stoves.
- (2) If serving equipment is adequate but cooking equipment is not useable, the establishment could be converted into a Feeding Station. Prepared food brought from kitchens using other fuels or from improvised cooking sites could be served.

IMPROVISED INDOOR FACILITIES

In some situations, it might be necessary to take over suitable buildings, acquire the essential equipment and operate a temporary feeding facility. This might be a kitchen only, or it might include both preparation and serving areas.

Equipment for Food Preparation	For 200 Persons (Two Meals Per Day)	For 500 Persons (Two Meals Per Day)
Stoves	6 burners	8 burners
Simple coffee urn to set on single burner, hot plate or gas stove (10 gallon)	2	2
Stock pots (5 or 6 gallon for making soup, main dish, or beverage)	3	5
Large pans	4	6
Saucepans (for dipping)	2	2
Water pails	3	3
Mixing bowls (large)	3	4
Fry pans (large)	2	2
Covered garbage cans	2	3
Graduated measure (1 quart)	1	1
Knives—bread	2	2
—butcher	2	2
—paring	4	6
Knife sharpener	1	1
Sandwich spreaders (8 inch)	4	4
Cooks' forks	2	2
Food chopper	1	1
Measuring spoons and cups	1 set each	1 set each
Large spoons (for stirring)	3	4
Large cutting boards	2	2
Can opener (wall or table type)	1	1
Vegetable brushes	2	3
Work table area (folding tables, planks, trestles, bricks, etc.)	as required	

Equipment for Food Service	For 200 Persons (Two Meals Per Day)	For 500 Persons (Two Meals Per Day)
Beverage pots or pitchers (for serving beverage)	6	8
Pitchers (for milk)	2	4
Ladles (8 ounce for soup or main dish)	2	2
Containers (for sugar)	2	4
Serving table (folding or improvised)	as required	as required
Plates, bowls, or mugs (25% added) ¹	250	625
Spoons (50% added) ¹	300	750

Equipment for Cleaning	For 200 Persons (Two Meals Per Day)	For 500 Persons (Two Meals Per Day)
Sinks (if already installed in building being used) or	as available (plus extra required to make a three compartment unit)	as available containers as make a three
Dishpans, large tubs, pails, etc.	3	6
Dish sterilizing compound	1 bottle	2 bottles
Dish cloths	6	12
Cleaning cloths	as required	as required
Detergent	1 package	2 packages
Soap	4 bars	6 bars
Scouring powder	1 can	2 cans
Hand towels (paper)	4 rolls	6 rolls
Scrapers (for cleaning pots)	6	12
Scrubbing brushes	2	2
Mop	1	1
Broom	1	1
Dustpan	1	1

¹ To allow for loss and/or breakage.

Miscellaneous	For 200 Persons (Two Meals Per Day)	For 500 Persons (Two Meals Per Day)
Household bleach (for purifying water)	1 bottle	1 bottle
Hammer	1	1
Scissors	1	1
Knife sharpener	1	1
Box (for knives)	1	1
Matches	as required	as required
Pot holders	8	8
Sterilized new garbage cans (for storage of staple food supplies)	as required	as required
Aprons	as required	as required
Oil can (if oil stoves used)	as required	as required
Equipment for Accident Prevention	For 200 Persons (Two Meals Per Day)	For 500 Persons (Two Meals Per Day)
First Aid Kit	1	1
Fire extinguisher	1	1

OUTDOOR FEEDING

Improvised outdoor feeding might be required in any community due to destruction of existing feeding establishments, disruption of public utilities, and/or inadequacy of existing feeding facilities to cope with the number to be fed.

SELECTING A SITE

Desirable features for an outdoor feeding site are:

- (1) Level, well-drained ground. Besides ensuring dry ground, this helps to prevent accidents.
- (2) Shade.
- (3) Within walking distance of those to be fed.
- (4) Accessible to supply routes.
- (5) Near safe drinking water.
- (6) Located in an area free of excessive shrubbery, broken glass, tin cans or other trash, stones, and stagnant pools.

LAYOUT

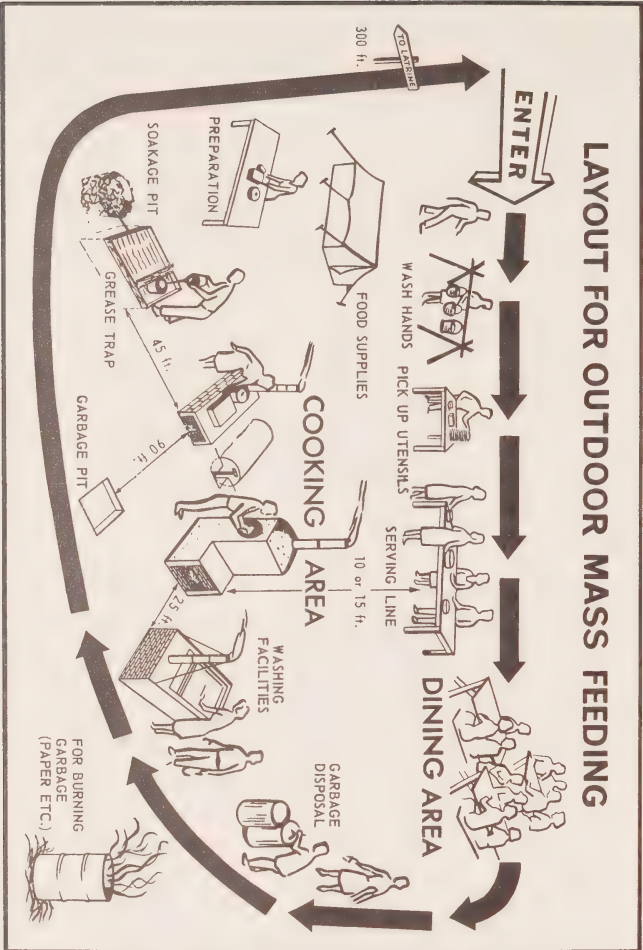
General principles for laying out an outdoor site are:

- (1) Cooking equipment should be arranged parallel to the serving line. There should be a ten foot aisle between the two areas and at least six feet between open fires.
- (2) Oven openings should face away from the serving line.
- (3) The serving line should lead directly into the eating area.
- (4) Trash cans and a dishwashing unit should be placed at the outer edge of the eating area for people to wash their own utensils. The dishwashing unit may consist of three large containers over a slit trench. A person should be assigned to this unit to keep water boiling and changed as required, and to keep people moving.
- (5) A grease trap and soakage pit should be placed at least 25 feet away from the cooking area and on the side opposite the eating area.
- (6) Latrines should be at least 100 yards from the cooking site.

For further information on improvisation see Appendices "F", "G" and "H".

The following diagram shows a suggested layout of an outdoor feeding site.

LAYOUT FOR OUTDOOR MASS FEEDING



MOBILE FEEDING

Mobile feeding would play an important role in the EF program. It might be required for groups of evacuees and/or workers temporarily unable to come to Feeding Stations, and in re-entry operations where other feeding facilities were non-existent. Each Welfare Centre must be prepared to send Mobile EF Teams where needed.

Mobile feeding can be carried out by one of the following means:

- (1) A mobile canteen.
- (2) A mobile kitchen.

MOBILE CANTEEN

This is a simple unit equipped only for serving food prepared elsewhere. They have limited use and must be replenished with food and eating utensils frequently.

Equipment

A truck, station wagon, jeep or automobile can be made into a mobile canteen by the addition of knock-down frames and tarpaulins.

The following equipment would be required for a menu of simple, ready-to-eat foods, easily transported and served:

- (1) Unit to heat or keep food warm.
- (2) Serving utensils.
- (3) Disposable plates and cups.
- (4) Spoons (if required).
- (5) Containers for foods and liquids.
- (6) Garbage cans.
- (7) Folding table (for serving).

MOBILE KITCHEN

This is a unit consisting of one or more vehicles fully equipped to prepare and serve food. It carries its own water, food supplies, and fuel. It could be an improvised unit or a more elaborately equipped truck such as caterers use in some communities.

Equipment

The EWS Division of the Department of National Health and Welfare has produced a prototype Mobile Feeding Unit. This is a mobile kitchen capable of providing a simple menu to 200 persons per hour on a continuous basis.

It is packed into five fitted wooden cases which can be set up as work tables when unpacked. A limited number of Units are stockpiled in the provinces. However, as the equipment consists of standard, commonly available items, any community could assemble a similar Unit. It contains equipment for:

- carrying water
- starting fires
- opening cans
- preparing food
- cooking
- serving
- eating
- washing and cleaning
- garbage disposal.

The equipment included in the Unit may be modified to meet the needs of the emergency.

One truck (one and one half or two ton) can transport the equipment, food supplies, fuel and workers to the site of operation.

FOOD SERVICE IN EMERGENCY

Certain guiding principles are common to any kind of emergency feeding—indoors, outdoors or mobile. These principles relate to location of serving area, space and equipment requirements, and arrangement of serving lines.

LOCATION OF SERVING AREA

- (1) If a serving area must be improvised, a large clear area in which the feeding line(s) may form, should be chosen.
- (2) If food is prepared on the premises, the serving area should be placed as close to the kitchen as possible.
- (3) If food is prepared elsewhere and brought in, the serving area should be set up as close to the delivery entrance as possible.
- (4) The serving line(s) should be arranged as close to the eating area as possible.

SPACE

Minimum space needed for an improvised serving area would be 50 to 60 square feet. This includes approximately ten linear feet of table space with a three and one half foot aisle for the workers behind serving tables which are two feet wide.

EQUIPMENT

The following minimum equipment is suggested:

- (1) Serving tables (improvised from planks placed on trestles, bricks, concrete blocks, or empty oil drums).
- (2) Large containers (in which the food was cooked, if possible).
- (3) Large pitchers.
- (4) Serving utensils (ladles, tongs, forks, large spoons).
- (5) Trays, pans, bowls, lined cardboard boxes (for bread, sandwiches, fruit, cookies, sugar).
- (6) Eating utensils.

ARRANGEMENT OF FEEDING LINE(S) AND SERVING COUNTER

It should be remembered that shocked, confused people cannot move as quickly as in normal cafeteria lines. To speed service, the following suggestions are made:

- (1) If a large group is to be fed, there should be several serving stations to permit formation of more than one

line. Rope barriers should be used as necessary. In some layouts, two lines of servers could work back to back, and a single line of people could break into two lines at the beginning of this double serving line.

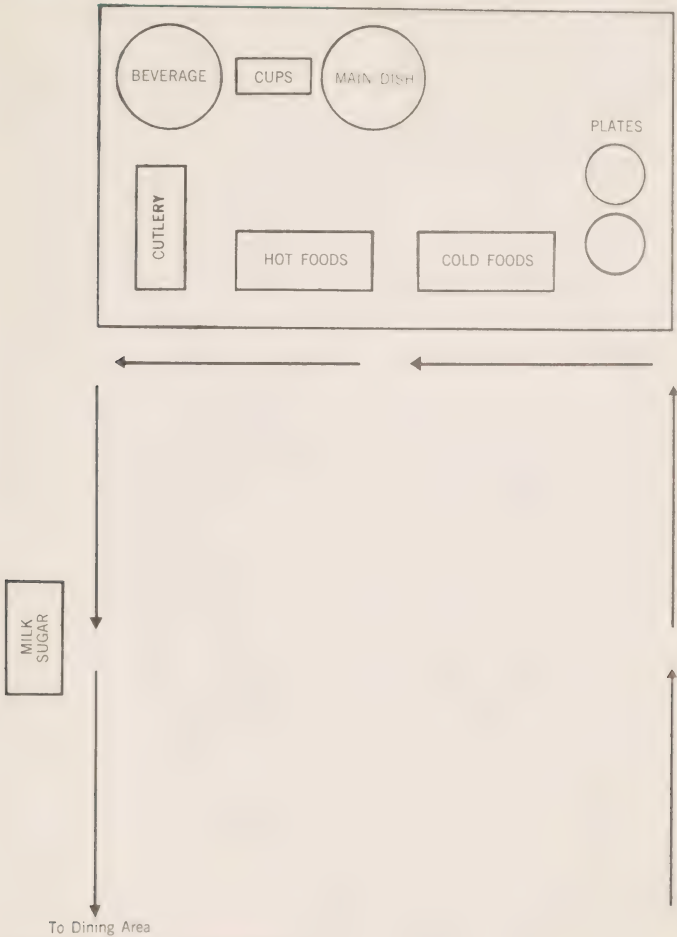
- (2) Large directional signs should be posted in the serving area.
- (3) Traffic directors should stand at strategic points to keep lines moving. Such points would be at the entrance to the serving area, at the beginning of the serving line(s), at the end of the serving line(s) to direct people to the eating area, at garbage disposal points, at the soiled dish collection site, and at the exit of the serving area.
- (4) Helpers should be assigned to assist young children and elderly people in carrying their food to the eating area.
- (5) Each server should be assigned a specific task or a specific item to serve.
- (6) The size of portion should be established before serving starts. If possible, a ladle or container which holds the established portion should be used.
- (7) Forks or tongs for serving bread should be supplied to eliminate the use of fingers.
- (8) Hot food should be served toward the end of the line so it will still be warm when taken to the eating area.
- (9) Some foods such as fruits which are purchased in large cans may be served directly from their containers.
- (10) Serving utensils and dishes for eating should be arranged convenient to the server. Disposable cups (arranged on clean towels, paper, or trays) are easier to pick up when inverted.
- (11) If enough servers are available and if disposable service is used, it will save time to have one person pick up a plate and pass it to the server to fill. This also applies to disposable cups.
- (12) Cutlery should be placed in containers with handles upright. This avoids contamination of the eating surface by handling. It is suggested that cutlery be placed at the end of the serving line, rather than at the beginning of the line.
- (13) Addition of milk and sugar to the beverage saves time.
- (14) If the milk and sugar are not added directly to the beverage, they should be placed apart from the food serving counter to avoid bottlenecks at the end of the line. People can then help themselves to milk and sugar as desired, without slowing the entire line.

Examples of Feeding Line Arrangements

The number of lines and their arrangement will depend on number to be served and the available space.

Several possible arrangements are shown by the following flow charts.

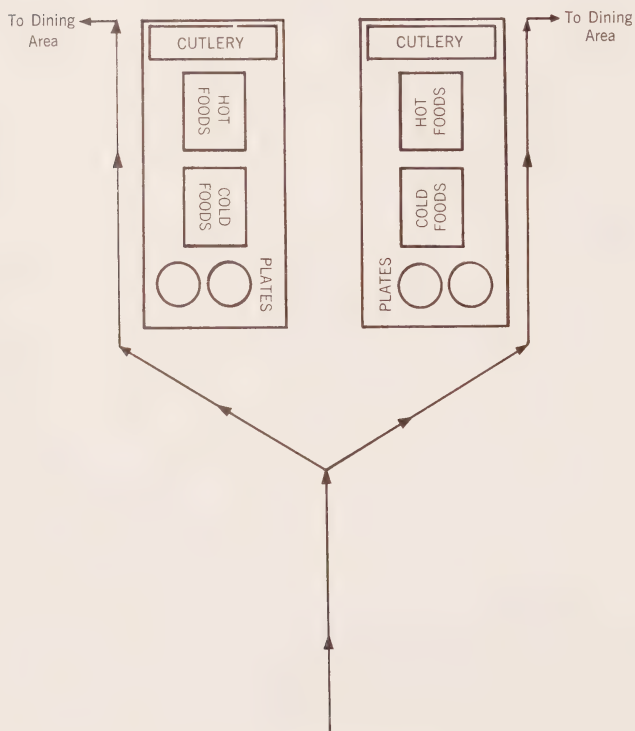
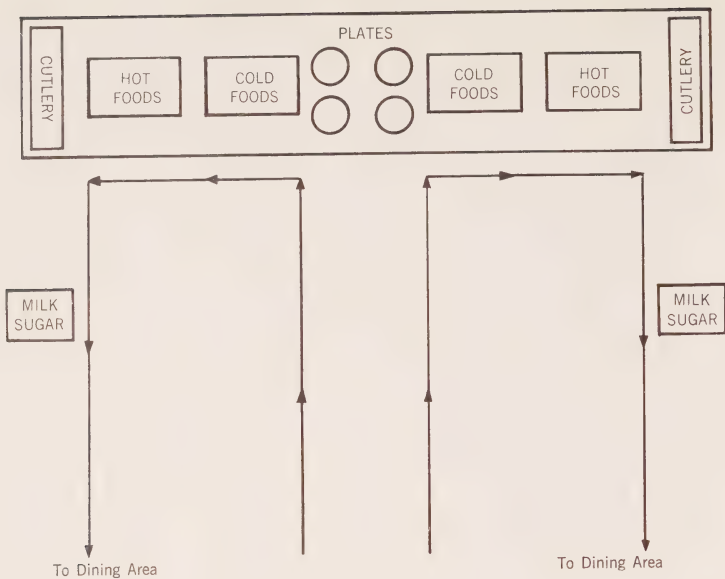
Single Line Arrangement

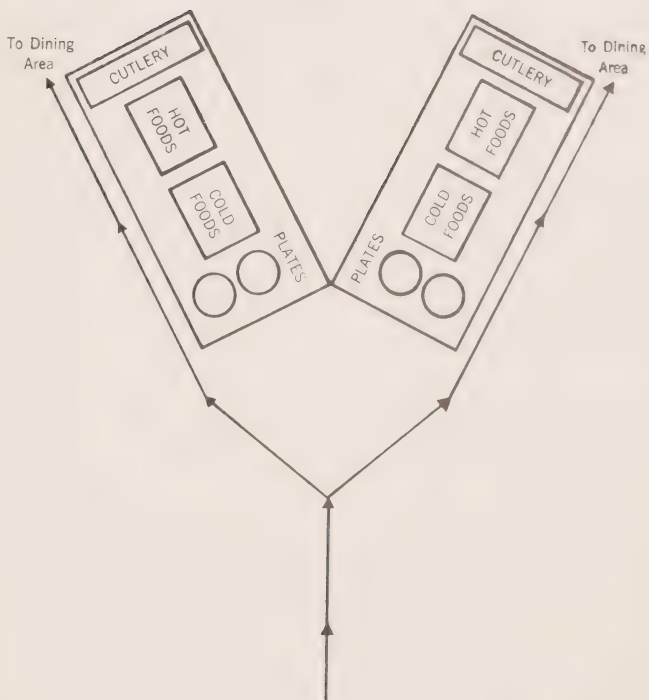
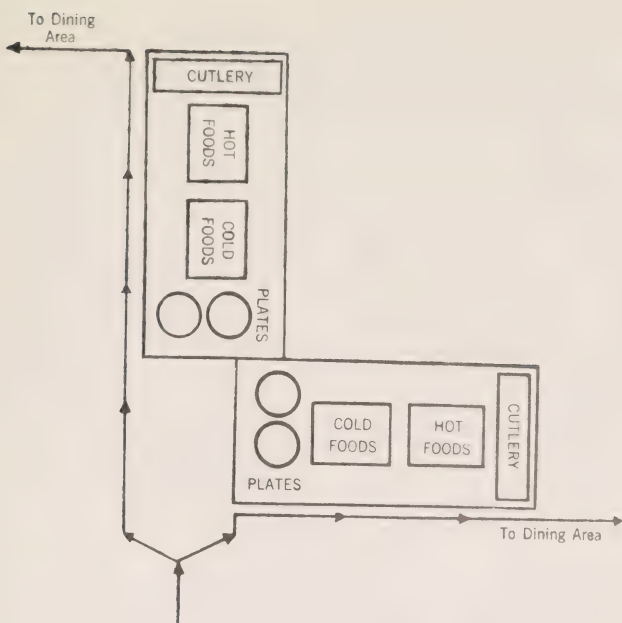


Double Line Arrangement

If more than 200 persons are to be fed and if space permits, it would be desirable to arrange two lines. There are several possibilities, depending on the layout of the available area and the location of entrances and exits.

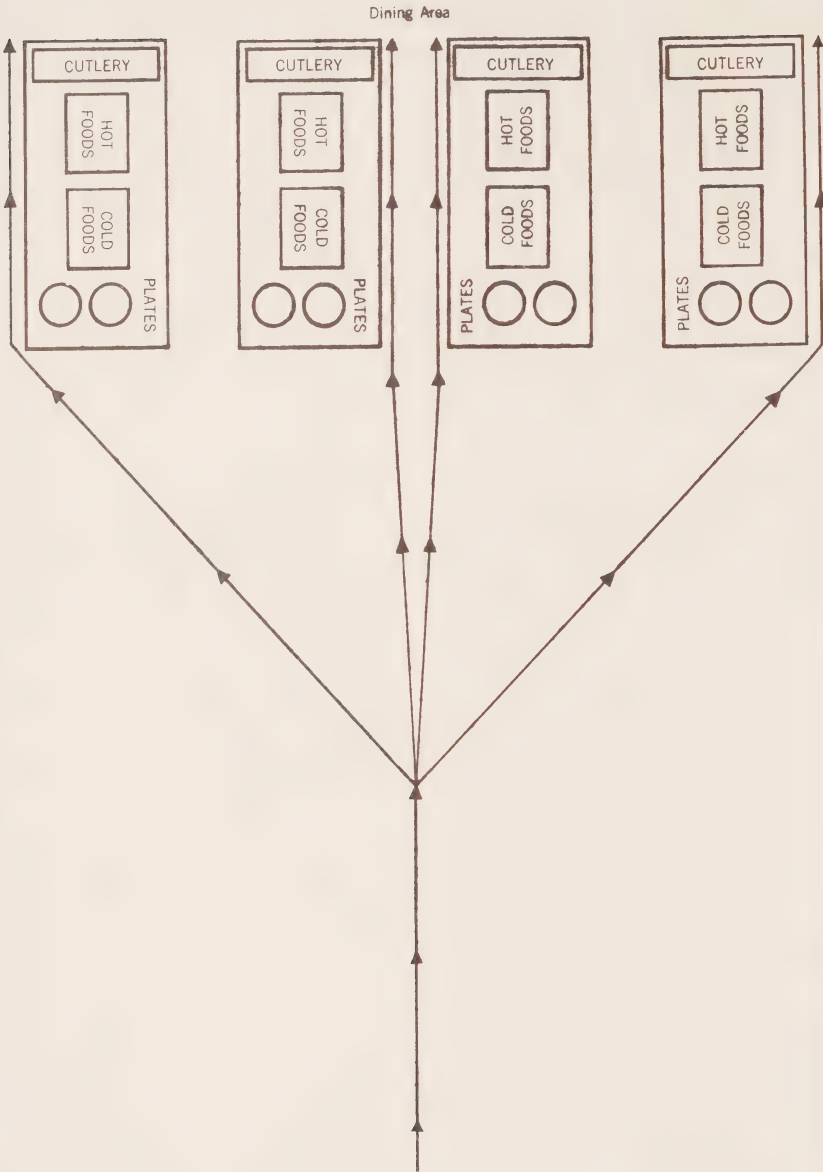
Some of these are:

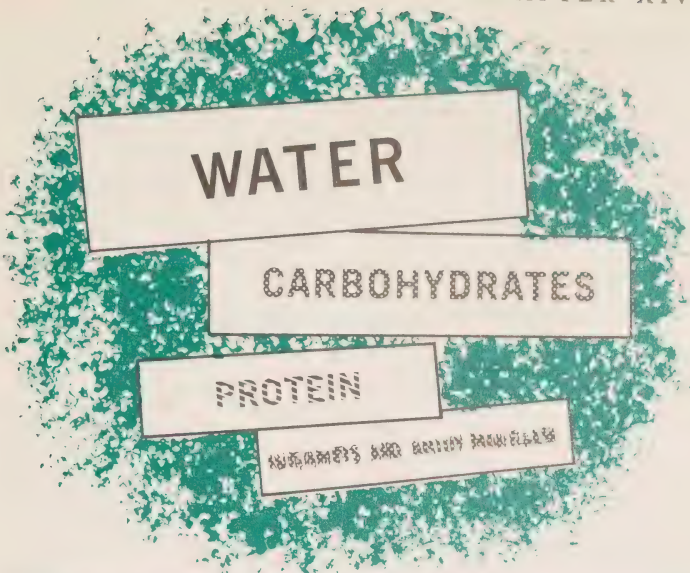




More Than Two Lines

If more than two lines are necessary, one suggestion for a four-line arrangement is as follows:





WATER

CARBOHYDRATES

PROTEIN

SUGARS AND SWEETENERS

NUTRITIONAL BASIS FOR EMERGENCY FEEDING

The following standards have been recommended by the Canadian Council on Nutrition, the nutrition advisory body to the Department of National Health and Welfare.¹

PRINCIPLES

- (1) Only water can be regarded as essential for survival during the first few days of an emergency. For infants it is a critical need within a few hours. At least one quart of safe water per person per day must be available.
- (2) About 400 calories daily from carbohydrates such as sugar has a physiological advantage to the body, especially when water is scarce.
- (3) If the intake of calories is low, effort of any kind will likely be restricted by the people concerned. Therefore feeding must be related to the work being performed or expected.
- (4) After water and calories are provided, no nutrient has a special claim for attention for three to four weeks except protein. It must be considered for certain groups—infants under two years, casualties, expectant and nursing mothers.

¹ Originally prepared in 1957 and revised in 1961.

WATER

One quart of safe water per person per day, and more if possible, must be available under all circumstances. It must be free from contamination—both bacterial and radiation—or it must have been made safe by chlorination or other approved methods.

CALORIE LEVELS IN FOODS AS EATEN

Related to various time phases, requirements are as follows:

Immediately Following a Disaster

- (1) Infants—110 calories per kilogram (45 to 50 calories per pound).
- (2) Casualties—Many casualties should receive the regular calorie levels of evacuees (see below, 1800-3500 calories) supplemented as indicated by protein sources, which will provide some extra calories.
- (3) Survivors in shelters — being restricted in movement should have 800 calories per day each. This, in addition to the one quart of water per person per day would suffice for four or five days.
- (4) People on special diets—Patients suffering from diabetes, ulcers, colitis, radiation or burns should be passed through a medical clinic remote from the emergency area and accorded whatever foods are ordered, as available.

From Fourth Day to Three Weeks

- (1) *Essential workers*—engaged in hard physical work (e.g. rescue) will require adequate meals. They should receive at least 3500 calories per day.
 - engaged in sedentary work, office work, or light work should receive 1800 to 3000 calories per day.
- (2) *Evacuees*—normal, healthy, uninjured,
 - engaged in light work, and including expectant and nursing mothers, 2200 to 3500 calories.
 - sedentary, 1800 calories
 - children, from one year to ten years, 1200 to 1800 calories
 - on special diets, as ordered by medical authorities.
- (3) *Prolonged Emergency*
For a period of emergency feeding of more than three weeks, medical authorities must assess the complete

adequacy of the rations. Weighing people at intervals or quick physical examinations would reveal any significant caloric shortage. Blood and urine analyses reveal current supplies and reserves of essential nutrients.

PROTEIN LEVELS

Related to various time phases, requirements are as follows:

Immediate Emergency Period and Up to Three Weeks

- (1) Infants have special needs for protein at a rate of at least 1.5 grams per kilogram (or 0.7 grams per pound) for the first few weeks.
- (2) Expectant and nursing mothers require protein at a rate of from 10 grams to 20 grams per day above the ordinary requirement (total 70 to 90 grams daily).
- (3) Most casualties and sick persons will have special needs for protein to a total of 100 grams or more daily.
- (4) Evacuees and essential workers would have no critical needs for protein if meals of reasonable balance and frequency are being supplied. A level of at least 35 grams protein per day should be provided.
- (5) In shelters, with restricted activity, a survival ration of carbohydrate, such as a starch jelly, would be suitable even though it contains little or no protein.

Prolonged Emergency

With the gradual return to normal conditions, the objective should be to reach and maintain the protein levels listed in the Canadian Dietary Standard.¹

OTHER NUTRIENTS

In prolonged emergency, the objective should be to reach and maintain all the levels listed in the Canadian Dietary Standard.

CONDITIONS OF FEEDING

Varying conditions for feeding or catering with respect to work, fuel, water and equipment, as well as the basic require-

¹ This reference should be available to provincial and zone Chiefs at Headquarters. A copy is available from provincial Departments of Health.

ments of individuals, families or groups, make it unrealistic to specify precise menus or methods. The important thing to emphasize is that safe water and some kind of food are critical necessities for the life of some people, for the ability to work, and for the morale of all people. Acceptable presentation of food so that it is eaten can be as important as its nutritive value.

INTERPRETATION

Interpretation of nutritional and feeding principles by trained and experienced people is desirable and perhaps essential.

SUGGESTED FOOD FOR EMERGENCY

The type of food which could be provided by the EF Service would vary according to staff and resources.

FOOD PRIORITIES

If it seems likely that shortages will develop, the Chief at Headquarters, in consultation with WSA, must establish food priorities. Only in this way could best use of food supplies released by WSA for emergency feeding, be ensured.

Milk

- (1) Infants up to two years must have first claim on uncontaminated milk of all types. Nursing mothers should receive the infant's ration of milk.
- (2) Next priority group should be expectant mothers.
- (3) Wounded casualties and young children should be the next groups to be considered.

Canned and Bottled Fluids

In the event of safe water being unavailable, other safe fluids may be required for infant formulas. (See Chapter XVI).

Sugar and/or Corn Syrup

Sufficient quantities of these items must be reserved for the anticipated number of infant formulas to be prepared.

Special Infant Foods

Items such as pre-cooked infant cereals, and canned "Infant" and "Junior" foods should be reserved for babies and young children.

Soups

Some patients in regular and Emergency Hospitals would be able to take fluids only. Therefore, canned and dehydrated soups should be carefully considered in planning the overall EF program.

GENERAL CHARACTERISTICS OF FOOD FOR EMERGENCY FEEDING

It is preferable to use foods which are easy to cook and serve, and which appeal to all age groups. Foods which can be cooked in one container are especially recommended. They

conserve cooking utensils and stove space. Another reason they are recommended is that boiling destroys harmful bacteria and ensures safe food.

Useful Foods

In the early emergency period when speed and convenience would be the main factors these foods would be useful:

- (1) Soups (dehydrated, canned, or made by diluting canned stews).
- (2) Canned meats, canned fish. (Quick soups and stews may be made from canned meat or fish with the addition of canned vegetables, including all the liquid).
- (3) Ready-to-serve canned meals (e.g. beans, spaghetti, stews).
- (4) Hard cooked eggs.
- (5) Fruit (fresh, canned, dried).
- (6) Canned vegetables.
- (7) Bread, crackers, biscuits, cookies, baked goods.
- (8) Spreads (butter, margarine, jam, jellies, cheese, peanut butter).
- (9) Dry cereals.
- (10) Beverages (tea, coffee, cocoa, fresh, dried, and evaporated milk).

EMERGENCY FEEDING PATTERNS

In the first few days after a disaster, the EF Service can anticipate many demands. Several possible emergency situations are given with suggestions for suitable food service.

Situation — Immediate Feeding

Appropriate foods would be a sweetened beverage or a soup with bread, sandwiches, biscuits or cookies. A sweetened beverage helps to counteract shock. To save time in serving, both the sugar and milk can be added directly to the beverage.

Situation — Continuous Feeding

Foods which lend themselves particularly to this situation are stews or thick soups with bread, biscuits or sandwiches, fruit, cookies, cheese, and beverages.

Situation — Fuel, No Safe Water

In this situation the following procedures would be essential:

- (1) All liquids from canned foods must be utilized.

- (2) Other liquids such as juices, canned soups and soft drinks may be used in cooking.
- (3) To save water, foods may be heated in ovens instead of being boiled.
- (4) Because dishwashing would be difficult, foods which can be eaten from the hand should be used as much as possible. If available, disposable service should be used in this situation.

Situation — Water, No Fuel

Meals could be prepared from the following:

- (1) Cold ready-to-serve foods (e.g. beans, spaghetti, canned soups).
- (2) Canned meats and canned fish.
- (3) Cold vegetables.
- (4) Ready-to-eat cereals.
- (5) Fresh, canned and dried fruits.
- (6) Biscuits, cookies.

Situation — No Fuel, No Water

In this situation, dishwashing would be impossible. If disposable service is available, the following foods could be used:

- (1) Cold, canned, ready-to-serve foods.
- (2) Cold, canned vegetables.
- (3) Canned, raw, and dried fruits.
- (4) Ready-to-eat cereals with evaporated milk.
- (5) Fruit and vegetable juices.

If disposable service is not available, the following types of food would be essential:

- (1) Cold meats, canned fish, peanut butter, cheese, or sweet spreads made into sandwiches.
- (2) Biscuits and spreads.
- (3) Raw or dried fruits.
- (4) Cookies.

Mobile Feeding

Foods selected for this type of feeding must be simple, easily transported, and easily served. For example:

- (1) Beverage, soup, or simple main dish.
- (2) Bread, crackers, or sandwiches (avoid fillings mixed with salad dressings which are subject to bacterial contamination).
- (3) Cookies, and other items which could be eaten "out of hand" (e.g. cheese, raw fruit).

Two Meals a Day

This type of feeding would be possible at a later stage when facilities were more organized and public utilities available:

(1) *First Meal*

Fruit juice

Cooked or ready-to-eat cereals

Bread and spread

Hot beverage with sugar and milk.

(2) *Second Meal*

Substantial soup, stew or other main dish (e.g. thick soups, chowders, stews, baked beans, macaroni, spaghetti or rice dishes)

Bread, crackers, or sandwiches

Fruit, cookies, or simple dessert.



FEEDING CHILDREN IN EMERGENCY

Small infants cannot tolerate long periods without feeding before becoming dehydrated and ill from lack of water. Good infant feeding services would be a comfort to both infants and their mothers.

The risk of infection, particularly by organisms which cause vomiting and diarrhoea, would be increased under emergency conditions. Feedings must be prepared as carefully as possible to minimize the risk of milk-borne infection.

CHILDREN TO BE PROVIDED FOR

Under One Year of Age

Safe milk would be required for this group. It makes up approximately two percent of the general population.¹

Children Between One and Two Years

Other suitable foods for young children could be in short supply and the one to two year old group is still particularly susceptible to gastrointestinal infection. Therefore, safe milk should also be available for this group. It too makes up two percent of the general population.¹

¹ D.B.S. Figures (1966).

SUITABLE FORMULAS FOR EMERGENCY

If mothers cannot breast feed their infants, one of the following formulas would be satisfactory for the majority of healthy infants:

Formula Composition

(For one infant per day)

Under 6 Months

1 can (15 fluid ounces) Evaporated milk

1 ounce sugar (2 tablespoons)

25 ounces water

or

5 ounces skim milk powder (approximately $1\frac{3}{4}$ cups)

1 ounce sugar (2 tablespoons)

40 ounces water

or

30 ounces safe fluid milk

10 ounces water

1 ounce sugar (2 tablespoons)

Over 6 Months

1 can (15 fluid ounces) Evaporated milk

1 can water

or

5 ounces skim milk powder (approximately $1\frac{3}{4}$ cups)

30 ounces water

or

30 ounces safe fluid milk

Note:

The amounts of mixture required per baby will vary with age. The total amount of mixture should be dispensed in eight ounce quantities. This is based on the assumption that infants under six months would need at least five feedings per day, while those over six months may get along on four feedings per day. This will vary with the availability of other foods. If no solids such as cereal were available, more milk feedings would be necessary.

EQUIPMENT REQUIRED

For 80 bottles of formula:

80 bottles

80 nipples

80 bottle caps—metal, pyrex, or paper.

(Brown wrapping paper can be used, tied on loosely to allow steam to circulate around the nipple).

Mixing bowls, saucepan, bottle brush, tongs, measuring cup and spoons, quart measure, mixing spoon, funnel or wax paper, sterilizer (wash boiler, large pot, kettle, can), rack or towel for bottom of sterilizer, can opener, masking tape, pencil, and cool storage are needed.

SUPPLIES REQUIRED

For 80 bottles of formula for infants under 6 months:

- 16 cans Evaporated milk
- 1 pound sugar
- 10 quarts water
- or
- 5 pounds skim milk powder
- 1 pound sugar
- 16 quarts water
- or
- 12 quarts safe fluid milk
- 4 quarts water
- 1 pound sugar

These amounts would be useful as a guide for the Supervisor in an average Welfare Centre preparing to receive 2,000 evacuees of which two percent (40) could be infants. By preparing 80 bottles of formula, one bottle would be available for each infant on arrival at the Welfare Centre, plus one bottle for the mother to take to her place of emergency lodging.

METHODS OF PREPARATION TO ENSURE SAFETY

Terminal Heating in Feeding Bottles

This is the best method as long as sufficient bottles, nipples, and caps are available. The procedure would be:

- (1) Utensils and bottles washed in hot water and detergent, and rinsed in clear, hot water.
- (2) Nipples washed and tested for flow, and then boiled for five minutes.
- (3) Top of can washed, if canned milk is used.
- (4) Formula ingredients measured. If powdered milk is used, a small amount of the water can be added to the powdered milk to make a paste, and then the remaining water and sugar added.
- (5) Bottles filled with milk mixture using funnel or improvised wax paper or aluminum foil funnel.
- (6) Nipples and caps put on bottles (caps put on loosely to allow steam to circulate around nipples).
- (7) Boiled in covered water bath for 25 minutes with the water level slightly below milk level.
- (8) Cooled two hours at room temperature.
- (9) Caps tightened and bottles stored at 40°-45°.

Terminal Heating in Large Containers

(Quart or Gallon Bottles)

This method can be used if bottles, nipples, and caps are scarce. The procedure for preparation and the processing time are the same as for the individual feeding bottle method. The containers should be cooled, caps tightened and then refrigerated or kept cold after two hours at room temperature.

Individual feedings can be poured into previously sterilized bottles at each feeding time using a sterile funnel or sterile pouring cup. Sterilized nipples and caps are put on at the time of pouring.

Preparation by Means of Sterile Technique

With this method formula ingredients are boiled together, then poured into previously sterilized feeding bottles. This method requires more skill, and workers familiar with the technique. Sterile technique can be used if formulas have to be prepared at every feeding. This would be necessary if bottles or nipples are in short supply, or if a water bath is not available, or if cool storage is not available.

The procedure would be:

- (1) All utensils, bottles, nipples and caps washed and sterilized.
- (2) The milk mixture boiled gently for five minutes, with stirring to prevent scumming. Some additional water must be added at the beginning to allow for evaporation.
- (3) The milk mixture is then poured into the sterile bottles.
- (4) Nipples and caps put on using careful technique, avoiding touching the part of the nipple which will go into the baby's mouth.

Note:

- (1) It must be stressed that all utensils used in feeding infants (e.g. cups, spoons, funnels) must be sterile. A supply of disposable cups in sealed packages should be available at Welfare Centres.
- (2) If safe water is temporarily unavailable, other suitable fluids such as bottled and canned fruit liquids or soft drinks (decarbonated by standing, stirring, or shaking after opening) may have to be used. These liquids may cause curdling of the milk, especially after processing. Although this could not do the baby any serious harm,

the taste may cause the baby to reject it unless he is very hungry. Such mixtures may tend to clog the nipples. In this case they can be given by means of a sterile cup and a sterile spoon. Also, a thin solution of cereal and juice could be given by spoon.

- (3) If bottles must be cooled quickly they can be placed in successive containers of water, starting with warm water and becoming increasingly colder. This is to prevent breakage. Care must be taken to prevent water coming in contact with bottle caps. To prevent this, the water level should be maintained half way up the bottles, only.
- (4) After two hours at room temperature formulas *must* be refrigerated.
- (5) If supplies of bottles and nipples are limited or if cool storage is inadequate, it may be necessary to prepare formulas several times a day using the same equipment, thoroughly washed and sterilized before each use.
- (6) The usual practice of warming formula to body temperature before feeding the infant may not be possible in an emergency. In most cases, safe, unwarmed formula will not harm healthy infants.

IMPROVISATION

In an emergency, some improvisation may be necessary. Here are some suggested substitutes for nursing bottles, nipples, and cool storage:

Bottles

If no nursing bottles are available, soft drink, beer, medicine, vinegar or other kinds of bottles can be used providing they are thoroughly washed, rinsed, sterilized and the nipples fit. The best type of nipple to have on hand for an emergency is a type which fits a narrow necked bottle.

Nipples

It is difficult to suggest a substitute for nipples. However, if necessary infants could be fed by sterile spoon. Those over six months are often familiar enough with drinking from a cup to be fed that way. Disposable cups from a sealed package could be used.

Cool Storage

A 15 cubic foot refrigerator provides space for 450 feeding bottles, a full day's supply for 40 infants and for 40

children between one and two years of age. Therefore, every effort should be made to acquire this space in places where infant formulas are being prepared in quantity.

If neither refrigeration nor other cool storage space is available, cooled bottles of prepared formula could be wrapped in wet newspapers to extend the recommended two hour period at room temperature to a maximum of four hours. Care must be taken that the paper does not dislodge the bottle caps.

SOLID FOODS

It is difficult to keep older infants satisfied for very long periods on milk; so it would be desirable to have stocks of pre-cooked infant cereals available. A serving of two to three tablespoons, dry, for mixing with the infant's milk ration, twice a day, would be a suitable amount. This would be given by sterile spoon. In the absence of other appropriate infant foods it could be given more often and in larger quantities.

FOOD SUBSTITUTES

If milk or infant cereals were not immediately available, serious water loss in the baby must be prevented by giving boiled water or sweetened liquids, e.g. a thin sugar and water solution.

Other possibilities are: canned or cooked meats, non-fatty fish or vegetables finely sieved and spoon fed, or a soft "pap" of bread, crackers or biscuits mixed with any safe liquid.

If emergency feeding of infants should extend beyond a month, it might be necessary to provide 30 milligrams Vitamin C and 400 International Units Vitamin D daily. The Vitamin D content of the canned milk formulas should also be noted.

HOSPITAL FEEDING IN EMERGENCY

Depending on local planning between EWS and EHS, feeding in Emergency Hospitals may be the responsibility of the EF Service. However, regular hospitals are responsible for making their own disaster feeding plans.

EMERGENCY HOSPITALS

These pre-packaged units, equipped to care for 200 patients or casualties would be set up in suitable buildings in reception communities. A total staff of approximately 260 (2 shifts) Emergency Health Services' workers would be required for their operation.

Facilities and Equipment

At present, there are no plans to include large scale cooking equipment with the units. Therefore, feeding facilities and equipment would be those available in the building designated during the planning stage as an Emergency Hospital, or procurable from other local resources.

If facilities were not adequate in such a building, other arrangements would have to be made in the overall EF plan for the community. For example:

- (1) Food could be prepared in another feeding establishment or an Auxiliary Kitchen and transported to the hospital to be reheated and served.
- (2) An improvised kitchen could be set up in the building if space permitted. (See Chapter X for space and equipment suggestions).

Type of Food Required

Three general types of food would be satisfactory for most patients and staff in an Emergency Hospital.

- (1) Sweetened tea or coffee for patients allowed clear liquids.
- (2) A more nourishing liquid for patients not able to take solid food. A cream soup would be the most suitable choice.
- (3) Emergency type meals for those patients on a regular diet, and for all staff.

Type of Food Service

In an Emergency Hospital, food service would be streamlined to essentials only. For example:

- (1) If carried out on the premises, food preparation should be centralized for efficient supervision.
- (2) In the immediate emergency period, it might be necessary to limit feeding to two meals per day.
- (3) Food for staff and ambulatory patients would be served cafeteria style using any equipment available.
- (4) Food for bed patients would be delivered in large containers to each floor for serving there.
(See Appendices "I", "J" and "K" for suggested meal order forms).
- (5) Normal tray service to bed patients would be curtailed, with a minimum of eating utensils used. Disposable service is recommended.
- (6) Therapeutic diets would be kept to a minimum. Regular foods could be softened, liquified or otherwise modified to meet the particular requirement.

Staff Requirements

The following is a guide for the approximate number of key workers required per shift to prepare simple emergency type meals for patients and staff in an Emergency Hospital:

Supervisor	1
Cooks	2

The following workers per shift would also be required, but they could be volunteers:

Cooks' assistants	3 or 4
Kitchen helpers	} The number would depend on the facilities, equipment and type of food service used for patients.
Food servers	

It is possible that key staff might have to work 12-hour shifts during the early emergency period. Later, eight hours would be a normal shift.

EMERGENCY PLANNING IN REGULAR HOSPITALS¹

Hospitals in Reception Communities

In a major disaster, hospitals in reception communities would be called upon to feed an increased number of patients,

¹ See Hospital Disaster Planning Manual (Emergency Health Services Division, Department National Health and Welfare)—Check Sheet for Food Service Area.

staff and volunteer workers. Hospitals would have to accommodate more bed patients. Consequently, feeding services would be complicated by extra beds in rooms and wards and in areas not previously used for patient care.

Hospital kitchens and dining areas are not normally used to full capacity, and in an emergency, space and equipment should not be major problems. However, plans would have to be made to convert feeding to a continuous 24 hour operation if required, and to use extra volunteer help. The following steps are suggested:

- (1) The hospital dietitian, in consultation with other senior members of the dietary staff, should prepare a written emergency feeding plan to be incorporated as part of the overall hospital disaster plan. It should contain enough detail to ensure it is clear. A copy should be given to each senior dietary employee. Copies should be provided for management to attach one to each copy of the hospital disaster plan.
- (2) Alternate arrangements in case of power failure and restricted water supply should be included in the plan.
- (3) Lines of succession should be established so the plan may be put into operation at any time.
- (4) All new staff should become familiar with the plan.
- (5) A set of emergency menus, and a list of food supplies and equipment required for their preparation should be compiled. The staff should be briefed on their preparation. Factors such as conservation of water, restricted food supplies, and rules of safe food handling under emergency conditions should be kept in mind.
- (6) As far as the hospital food budget will allow, an increased inventory of certain foods, particularly suitable for quick, emergency meals could be maintained. Suggested foods are processed milk, canned meats and fish, canned vegetables, dry cereals, biscuits, sweet spreads, juices, instant beverages and sugar.
- (7) The number of extra workers required to carry out the plan should be determined as closely as possible.

Hospitals in Probable Target Areas.

If a hospital has planned for evacuation from a probable target area, the location of the reception site would be known to the hospital administration staff. In this case the responsibility of the Dietary Department would be:

- (1) To be familiar with the feeding facilities in the pre-selected building at the reception site.

- (2) To determine jointly with the reception community hospital dietitian, what essential food supplies might be taken at evacuation, time permitting. (Food supplies should be high in food value in relation to bulk).
- (3) To determine what useful portable equipment could be taken, time permitting. Some suggestions are insulated food containers, portable urns, large stock pots, ladles, large pitchers, large mixing bowls, large spoons, and disposable eating utensils.
- (4) To devise a system to ensure that supplies can be moved at short notice. This includes assigning staff members to specific responsibilities in their removal. Transportation for food and feeding equipment must be co-ordinated with the overall hospital transportation resources.
- (5) To inform and train staff regarding the evacuation plan.

Alternate Plans

Because the emergency role of a hospital cannot be definitely predicted, the possibilities of both reception and evacuation should be kept in mind when planning. A hospital in a probable target area which had not evacuated and had not been struck or was only partially damaged, might be called upon to receive patients and/or casualties from other areas. Similarly, because of fallout a reception community hospital might be required to evacuate.



EMERGENCY FEEDING SANITATION

Unsanitary handling of food can be a serious health hazard. The danger is even greater in an emergency when food workers would be rushed and under stress. Thus, extreme care must be taken to avoid food contamination and the spread of communicable diseases through careless practices. To ensure safe food, strict supervision must be maintained on the source of the water supply, proper storage of food, personal hygiene of food workers, protection of food from contamination during preparation, sanitary disposal of waste, efficient dishwashing procedures, and the sanitary maintenance of EF premises.

DRY FOOD STORAGE

Under disaster conditions, storage facilities may not be ideal. However, the following principles contribute to good storage practices and should be observed as closely as possible:

- (1) The area should be kept cool, dry, clean, orderly, and protected against rodents and insects.
- (2) All food should be stored off the floor or ground on shelves or slatted floor racks to protect against dampness.
- (3) Staple foods should be stored in galvanized cans or other covered containers.
- (4) When opening containers of food, a check should be made for signs of spoilage or infestation. If spoiled food is found, it should be destroyed promptly.
- (5) If food is not to be used soon, the containers should be dated so the oldest stock will be used first.

REFRIGERATED STORAGE

Regardless of the type and amount of refrigeration facilities available in disaster, the following procedures should be followed:

- (1) Overcrowding should be avoided.
- (2) Cooked food should be cooled quickly before refrigerating.
- (3) The refrigerator interior, shelves and containers should be washed regularly. A solution of baking soda and water can be used. (See Appendix "G" for information on improvised cooling facilities.)

CARE OF MILK SUPPLIES

If pasteurized milk cannot be obtained, one of the following methods may be used to treat raw milk:

(1) *Flash Pasteurization*

With frequent stirring, the milk should be heated to 170°F in a double boiler, removed from the heat and allowed to stand for one minute. It can be cooled quickly to 50°F by placing top section of boiler in cold water.

(2) *Simmer Method*

With frequent stirring, the milk should be heated in a pan until it simmers (bubbles begin to form), and maintained at this heat for one half minute. It can be cooled by placing the pan in cold water.

If fluid milk is to be stored for extended periods it must be refrigerated. If refrigeration facilities are lacking, careful planning will be required to prevent the necessity of keeping large supplies on hand. These precautions in storing also apply to reconstituted dried milk which requires as careful handling as regular fluid milk.

PERSONAL HYGIENE OF WORKERS

Principles of good personal hygiene are well established, but their application requires constant checking by Supervisors, especially when volunteer workers are involved in food handling.

Basic principles are:

- (1) Persons with outward signs of illness or disease, or with pimples, boils, skin eruptions, cuts, diarrhoea, heavy colds and other respiratory infections must not be used as food workers.

- (2) Food should be touched with hands only when necessary. Forks, tongs and ladles should be used.
- (3) Hands should be kept away from nose, mouth, face, hair, and ears. Fingernails should be clean.
- (4) Hands should be washed frequently with soap and water while preparing food, and always after using toilet or latrine.
- (5) Workers should not sneeze, cough, or blow nose over food.
- (6) Workers should not smoke while handling food.
- (7) Caps or hairnets should be worn if possible.
- (8) Clean, washable outer garments should be worn by workers.

PRECAUTIONS AGAINST FOOD CONTAMINATION

After ensuring that the water and food to be used in food preparation are clean and safe, precautions must be taken to ensure bacteria does not contaminate the food during preparation. Food-borne illnesses can be avoided by following good food handling practices. These are:

- (1) Potentially dangerous foods should be avoided. These are gravies and sauces, meat hash, meat and poultry stuffings, meat and fish salads, creamed dishes, custards, cream fillings, and raw milk.
- (2) All equipment must be scrupulously clean (e.g. tables, knives, other utensils, food preparation equipment such as choppers, mixers, beaters, and containers for transporting food and liquids). This requires hot water, soap and disinfectant.
- (3) Perishable foods must be refrigerated until used for cooking.
- (4) Boiling and cooking foods under pressure are great aids to safety. Therefore, any available equipment of this type should be used to the fullest extent possible.
- (5) After cooking, foods should not remain at room temperature for any length of time. Food should be prepared as close to serving time as possible, and kept hot until served.
- (6) Thickened foods should be avoided if they have to be transported any great distances. In these situations, soups and stews can be prepared without thickening.
- (7) Sandwiches should be labelled indicating the kind and time of preparation. They should not be served if they have been at room temperature over four hours.

- (8) The use of left-over foods should be avoided. If they must be used, they should be kept refrigerated and covered. They should be recooked immediately before serving.

GARBAGE DISPOSAL

Without the usual collection and disposal services, garbage can become a hazard. Health officials should be consulted regarding the site of a garbage dump. The following suggestions will help in handling the problem of waste disposal:

- (1) Garbage should be drained and wrapped in several thicknesses of newspaper before putting it into tightly covered containers. The garbage then can be stored for a longer period without developing an unpleasant odour.
- (2) As soon as possible, the garbage should be buried in a hole or trench with one to two feet of earth covering it. This will prevent animals uncovering it.
- (3) A simple and effective method of disposal of dry waste is by burning. Improvised incinerators can be used. Unburned residue must be buried and covered with at least two feet of earth.
- (4) Cans should be flattened and glass containers broken to reduce bulk.
- (5) Liquid wastes may be disposed of in a soakage pit. The construction of such a unit is described in Appendix "F".

DISHWASHING

The following methods should be used:

- (1) If mechanical dishwashers are available in time of emergency, they should be used to the fullest extent possible.
- (2) Minimum requirements for effective manual dishwashing are a plentiful supply of hot water, detergent, and three wash vats (one for washing, one for rinsing, one for sanitizing).
- (3) Eating utensils can be sanitized by either immersing the dishes in a chlorine solution of 100 parts per million for at least two minutes, or in hot water at 170° for the same period. If boiling water is used the immersion period can be reduced to one minute.
- (4) Towelling of dishes should be avoided if possible. They should be allowed to drip dry.

- (5) The effectiveness of the final rinse depends on how well the first two operations (washing and rinsing) are carried out. Solids carried over on the dishes to the final rinse will cause difficulties, especially if chlorine is used as the sterilizing agent. Therefore, dishes should be pre-scraped and pre-rinsed if supplies of water are sufficient.
- (6) Wire baskets with handles or perforated pails may be used for the rinsing and sterilizing operations.
- (7) Subsequent handling and storing of clean dishes is also important. If necessary, they should be covered with clean cloths or newspapers to prevent dust settling on them.

GOOD HOUSEKEEPING

Although locations for emergency feeding may not be ideal, every effort must be made to keep them as clean and tidy as possible under difficult conditions.



***EMERGENCY
FEEDING MANUAL
APPENDICES***



EMERGENCY FEEDING WORKERS' COURSE

(A Suggested Guide)

Object: A course to prepare workers for EF tasks.

Prerequisites: 1. Workers who have been recruited for the EF Service of EWS.
 2. Orientation to civil emergency planning and general EWS is needed.

Sessions: **Nine**, two hour sessions have been developed, with a four hour Exercise. They could be scheduled in a series of ten consecutive weeks, or programmed for three full days of training, if desired.

Content: The headings give the main subjects to be covered. A method of presentation has been suggested for each topic.

Session	Time	Subject	Type of Presentation
1.	.15	Official welcome — Purpose and Scope of Course	
	.60	Role of Emergency Feeding — Common problems — Groups to be fed — Where and how people will be fed	Lecture and Discussion
	.15	Film	Film
	.30	The Emergency Welfare Services	Lecture
2.	.45	The Welfare Centre and Welfare Centre Area; Feeding in the Welfare Centre	Lecture and Discussion
	.45	The Emergency Feeding Organization at the Local Level; Supporting Services Required.	Lecture and Discussion
	.15	"Planning, Organization and Operation of Emergency Feeding"	Filmstrip or slides

Session	Time	Subject	Type of Presentation
3.	.60	Conversion from Normal to Disaster Conditions — Types of feeding — Choosing feeding sites — Suitable foods — Methods of increasing number fed — Quantity food preparation in emergency — Streamlining service	Lecture and Discussion
	.40	Discussion Problems	Discussion
	.20	Discussion Reporting	Reporting
4.	.75	Construction of Improvised Units; Layout of an Outdoor Site	Lecture and Discussion
	.30	"Disaster Feeding"	Film
5.	.15	Briefing Session on Exercise	
	.90	Construction of Simple Improvised Units	Practical Exercise
6.	.60	Emergency Feeding Sanitation — Water supply — Milk supply — Food salvage — Garbage disposal — Dishwashing	Lecture
	.40	Discussion Problems	Discussion
	.20	Discussion Reporting	Reporting
7.	.60	Radioactive Contamination of Food, Water and Clothing	Lecture and Discussion or Demonstration
	.30	Feeding Infants in Emergency	Lecture

Session	Time	Subject	Type of Presentation
8.	.60	Safe Food Handling in Emergency — Personal hygiene — Food temperatures — Food transportation	Lecture and Discussion
	.45	Individual & Family Preparedness for Emergency	Lecture and Discussion
9.	.90	Planning a Feeding Exercise (including inspection of M.F.U. if available)	Discussion
	.15	"Exercise Hot Pot"	Film
10.	4 hrs	Outdoor Feeding Exercise — Setting up area — Preparation of meal — Serving meal — Clean up — Discussion of Exercise	

REPORT OF FOOD HOLDINGS

Name of reporting firm _____

Address _____ Telephone _____

Name of manager _____ Home telephone _____

Owner of stock shown on this report (✓ below)

☐ As above ☐ Other (please specify) _____

GROUP	ITEM	PERISHABLE			NON-PERISHABLE		
		lb	cases	gals	lb	cases	gals
A	Meat (1)						
	Poultry (2)						
	Fish (3)						
	Cheese (4)						
	Dry Legumes (5)						
	Nuts (6)						
B	Eggs, shell						
	Eggs, broken						
C	Milk (7)						
D	Flour (8)						
	Bakery Products (9)						
	Spaghetti Products (10)						
	Rice						
	Breakfast cereals						
E	Fruit (11)						
	Vegetables (11)						
	Juices (11)						
	Soups (11)						
F	Potatoes						
G	Butter						
	Margarine						
	Lard						
	Shortening						
	Oils						
H	Sugars						
	Syrups (12)						
	Jams, Jellies						
	Honey						
	Other sweets (13)						
J	Coffee						
K	Tea						
L	Salt						
M	Yeast						

Type of business ✓ below:

<input type="checkbox"/> Processing	<input type="checkbox"/> Retail	<input type="checkbox"/> Public Warehouse
<input type="checkbox"/> Wholesale		<input type="checkbox"/> Cold Storage Plant

A separate report is required in respect of stock held on behalf of each owner

PLEASE READ NOTES BELOW BEFORE COMPLETING THE REPORT

1. Meat includes liver, kidney, heart, tongue, TV dinners, chili con carne, beans with pork and other similar canned meat items.
2. Poultry includes liver.
3. Fish includes crustaceans and mollusks but excludes oils.
4. Cheese includes processed.
5. Dry Legumes include dry beans, peas and lentils.
6. Nuts include peanut butter.
7. Milk includes cream but excludes ice cream.
8. Flour includes mixes.
9. Bakery Products include biscuits.
10. Spaghetti includes macaroni, vermicelli, ravioli and noodles.
11. Fruit and Vegetables includes juices, soups and concentrates but excludes dry legumes and potatoes.
12. Syrups include molasses.
13. Other Sweets include chocolate, cocoa, confections and dessert powders and pudding

IMPORTANT

Perishable products are those requiring refrigeration.

Non-perishable products are those not requiring refrigeration

Date _____ 19____

Signature of reporting officer _____

Title _____

SUGGESTED SURVEY FORM — FEEDING FACILITIES¹ APPENDIX "C"

NAME OWNER OR MANAGER

ADDRESS HOME ADDRESS

TELEPHONE HOME TELEPHONE

SIZE OF KITCHEN CAPACITY PER HOUR

PRESENT STAFF: LARGEST NO. SERVED

COOKS

ASSISTANT COOKS

KITCHEN WORKERS

WAITERS OR

WAITRESSES

KITCHEN EQUIPMENT

	NO.	TYPE	CAPACITY	CONDITION
Ranges				
Ovens				
Steamers				
Broilers				
Deep Fat Fryers				
Coffee Urns or Makers				
Electric Mixer				
Bakery or Pastry Oven				
List other large equipment on the back of this sheet				
Stock Pots				
Sauce Pans or Kettles				
Baking Pans				

COOKING UTENSILS

	Cutlery — knives forks spoons ladles paring knives can openers						
STORAGE	Refrigerator Walk-in Cooler Frozen Food Storage						
DISHWASHING	Sinks Dishwashing Machine						
SERVING FACILITIES	Counter or Serving Tables Steam Table Cold Unit in Counter Trays Dinner Plates Soup Bowls Cups and Saucers Other Plates Other Bowls or Dessert Dishes						
SILVER	Knives Forks Soup Spoons Teaspoons						

DINING AREA	Tables						
	Chairs						
GENERAL	Total Seating Capacity						
	Other cans suitable for cooking						
	Stirring paddles						
	Fuel used						
	Hot water capacity						
	Garbage containers						
	Toilets — men and women						
	Cleaning equipment						
	Fire extinguishers						
	First Aid Kits						
OUTDOOR SPACE	Telephone						
	Adjacent to kitchen						

¹ This form has been condensed here to save space. For use, it would have to be spaced out to allow for tabulation of required information.

MESSAGE LOG
(Sample)

It is necessary for EWS in Headquarters and Welfare Centres to keep a record of all requests received, decisions made and/or action taken if there is to be a continuous, efficient operation.

It is suggested that the following type of "Message Log" be used. Whether or not an overall EWS Log or individual Service Logs are kept, would depend upon the decision of the EWS Director.

[illegible]

SUGGESTED STAFF FOR FEEDING FACILITIES

Because staff requirements under emergency conditions might differ greatly from those in normal feeding operations, it is difficult to suggest a fixed number of workers which would apply in all situations.

The number required would vary according to the experience of the available workers, the type of food served, as well as available facilities, equipment, and public utilities.

Although the number of staff required to feed 1000 persons per hour has been indicated if facilities are available, for numbers over 500 it would be preferable to set up additional units of similar capacity rather than single, larger units.

The number of workers indicated is calculated on a "per shift" basis. Therefore, alternates would be required for all positions. Double the number of workers could maintain continuous 24 hour service (eight hours on duty and eight hours off). If a different length shift should be required, the number could be adjusted accordingly. If two or more meals per day were to be served, the same number of staff would be adequate, if a sufficient break was allowed between meals.

Supervisors and cooks should be trained workers. Volunteers could perform the other duties. Some men should be included to lift heavy supplies and equipment.

FOR PREPARATION AND SERVICE IN INDOOR FACILITIES (PER SHIFT)

Staff	200 fed in 1 hour	500 fed in 1 hour	1000 fed in 1 hour facilities permitting
PREPARATION:			
Supervisors	1	1	2
Cooks	2	3	4
Cooks' Assistants	2	4	8
Kitchen Helpers	6	12	24
SERVICE:			
Beverage, Soup or Main Dish and/or	2	4	8
Sandwiches and Bread	2	2	4
Directing Traffic	2	4	6
CLEANING:			
Dishwashing and General Cleaning	2	4	6
TOTAL	19	34	62

FOR PREPARATION ONLY IN AUXILIARY KITCHENS (PER SHIFT)

Staff	200 fed in 1 hour	500 fed in 1 hour	1000 fed in 1 hour facilities permitting
Supervisors	1	1	2
Cooks	2	3	4
Cooks' Assistants	2	4	8
Kitchen Helpers	6	12	24
TOTAL	11	20	38

FOOD SERVICE ONLY IN FEEDING STATIONS (PER SHIFT)

Staff	200 fed in 1 hour	500 fed in 1 hour	1000 fed in 1 hour facilities permitting
Supervisors	1	1	2
Servers:			
Beverage, Soup or Main Dish	2	4	8
and/or Sandwiches and Bread	2	2	4
Traffic Directors	2	4	6
Dishwashers and General Cleaners	2	4	6
TOTAL	9	15	26

FOOD PREPARATION AND SERVICE IN IMPROVISED OUTDOOR FEEDING FACILITIES (PER SHIFT)

Staff	200 fed in 1 hour	500 fed in 1 hour	1000 fed in 1 hour facilities permitting
Supervisors	1	1	2
Supply Officer	1	1	1
Cooks	2	3	4
Cooks' Assistants	4	6	8
Servers:			
Beverage, Soup, or Main Dish	2	4	8
and/or Sandwiches and Bread	2	2	4
Traffic Directors	2	4	6
Water Tenders	1	2	2
Fire Tenders	1	2	3
Dishwashers and General Cleaners	2	4	6
TOTAL	18	29	44

FOOD SERVICE ONLY FROM A MOBILE CANTEEN (PER SHIFT)

Staff	200 fed in 1 hour	500 fed in 1 hour	1000 fed in 1 hour facilities permitting
Driver	1	1	1
Supervisor	1	1	1
Servers:			
Beverage, Soup or Main Dish and/or	2	4	8
Sandwiches and Bread	2	2	4
Traffic Directors	2	4	6
Helpers (trash and garbage)	2	2	4
TOTAL	10	14	24

MOBILE EF TEAM (PER SHIFT)

Key Workers	
Supervisor	1
Cook	1
Helpers	2
TOTAL	4 (One of these would also be the driver)
Extra Workers (recruited at the site of operations)	
Servers	2

FEEDING IN A WELFARE CENTRE AT PEAK PERIOD OF OPERATION (PER SHIFT)

Staff	W.C. for 500 Evacuees		W.C. for 2000 Evacuees		W.C. for 4000 Evacuees	
	Trained	Untrained	Trained	Untrained	Trained	Untrained
Supervisor	1	—	1	—	1	—
Assistant Supervisor	—	—	—	—	1	—
Beverage Makers	—	1	—	1	—	2
Kitchen Helpers	—	2	—	2	—	4
Servers	—	1	—	2	—	4
Dishwashers, Cleaners	—	3 ¹	—	3 ¹	—	6 ¹
Formula Preparation	1	—	1	2	1	2

¹ If disposable service is used only one or two dishwashers, cleaners would be required instead of three or six.

THE CONSTRUCTION AND USE OF IMPROVISED COOKING UNITS

An EF plan for any community should include provision for the construction and use of improvised equipment. The use of such equipment might be required if public utilities were disrupted, or if existing community facilities were inadequate for the number of people to be fed.

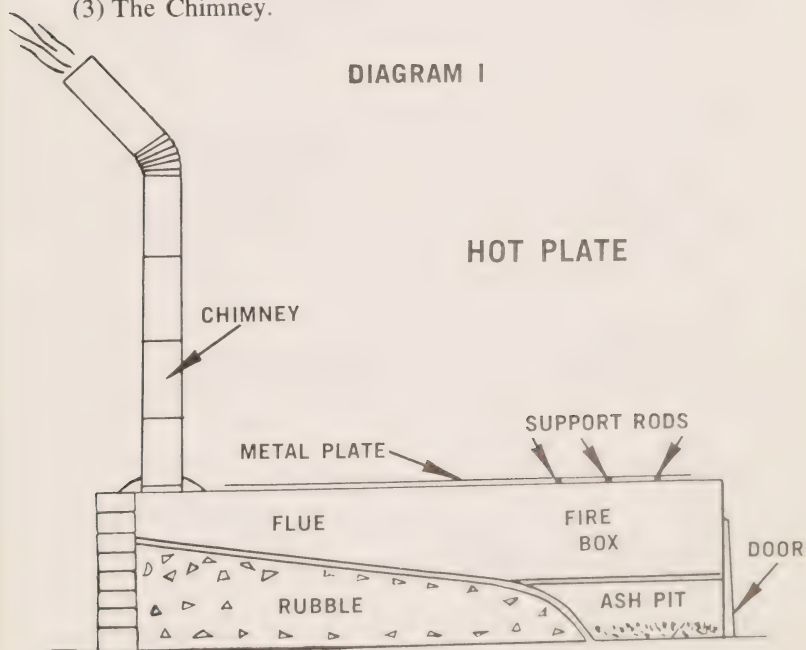
BASIC ELEMENT

Certain guiding principles are applicable in the construction of all improvised stoves. A knowledge of these will be helpful in making use of the materials available in different situations.

In choosing the site for the erection of improvised stoves, it should be ensured that it is reasonably level, dry and firm, and protected from the weather as well as possible without causing a fire hazard.

The basic elements of any improvised cooking unit are:

- (1) The Firebox.
- (2) The Flue.
- (3) The Chimney.



Firebox

The opening preferably should face the prevailing wind, and as a general rule the size of the firebox need not be larger than two feet long by one and one half feet wide by nine inches high. The draught of air necessary for rapid combustion is more easily obtained if the base of the firebox is raised above the ground. A grating, a grid, pipes laid cross-wise, or a perforated sheet, are some of the materials that may be used to improvise an elevated base on which the fuel can be placed. This also serves to make it handier to replenish the fuel and to remove the ashes.

The door which can be made from a metal plate, tin sheet or box, should be placed in front of the firebox opening. If the metal sheet to be used for making the hot plate is thin, it can be supported by means of metal rods, bars, or pipe. The height of the stove top is important for ease of working.

Flue

The fluebed should start slightly above the level of the firebox and rise gradually towards the chimney end. This may be built up with soil, rubble, or other solid filler. For a more efficient stove, the surface of the fluebed may be smoothed off with a layer of mortar or packed evenly.

Chimney

This may be constructed of cans telescoped together, brick or stone, if piping is not available. To ensure a good draught, the height of the chimney above the ground should be greater than the horizontal length of the flue. Down draughts can be avoided if a crook is placed in the pipe near the top.

Number of Units

For economy of fuel and increased working space, it is generally felt that a number of units as described is better than a large single stove.

MATERIALS FOR CONSTRUCTION

Stoves can be made of many types of material including bricks, cement blocks, sheet metal, tin cans, metal barrels and earth. In constructing stoves where bricks or cement blocks are used for walls, the mortar can be made from earth, grass and water mixed to a workable consistency. A small slow fire made in the completed stove will then serve to set the mortar without its cracking.

SIMPLE FACILITY FOR COOKING OR BOILING WATER (Diagrams II and III)

Materials

- (1) Cement blocks, bricks, earth filled cans, sods, and pug.
- (2) An oil drum (or half an oil drum).

Construction

- (1) As illustrated in Diagram II.
- (2) A firebox and ash pit could be added if desired, as per Diagram III.

DIAGRAM II

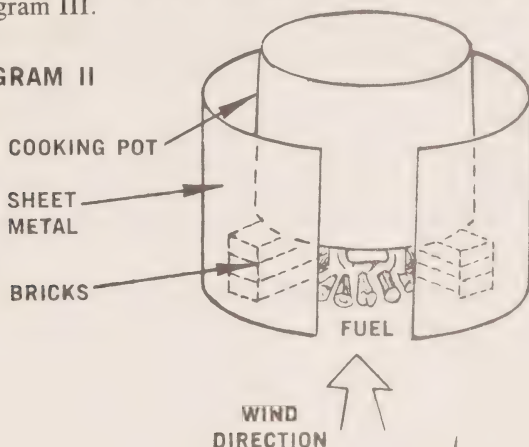
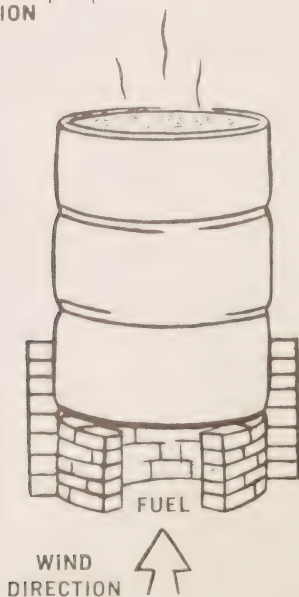


DIAGRAM III



CROSS FIRE TRENCH (BELOW GROUND) (Diagram IV)

Materials

- (1) Three pieces of sheet metal one and one half feet by one foot to regulate draught.
- (2) Approximately ten pieces of scrap iron, each two feet long for grate (pipe, angle iron or $\frac{1}{2}$ inch round iron).

Construction

- (1) Dig two trenches, each eight feet long, one foot wide, and one foot deep, crossing at their centres.
- (2) The ends of each trench should taper to the level of the ground.
- (3) Place scrap iron over the intersection of the trenches to make a grate.

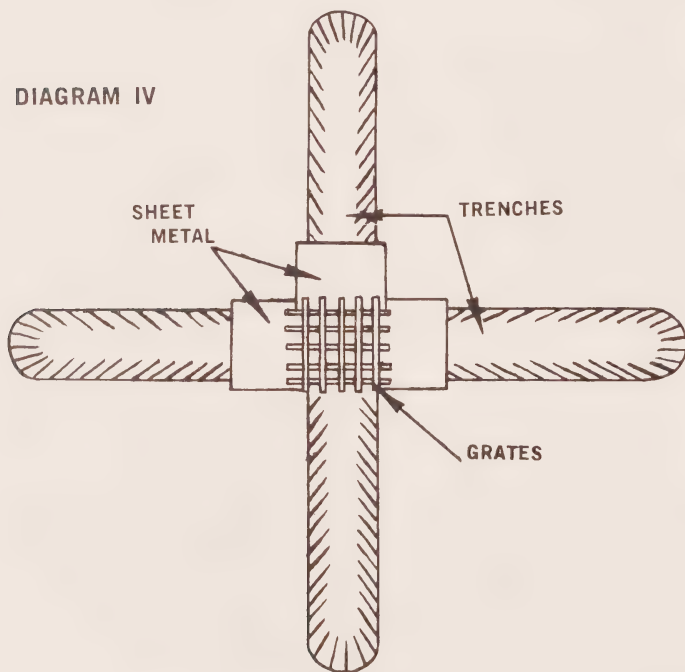
Operation

- (1) Build coal or wood fire at intersection of trench.
- (2) Use the three pieces of sheet metal to block off three of the four sides of the trenches. Leave open side facing the direction of the wind.

Number Needed (For Cooking and Incineration)

Two for 100 people.

Six for 500 people.



CROSS FIRE TRENCH (ABOVE GROUND) (Diagram V)

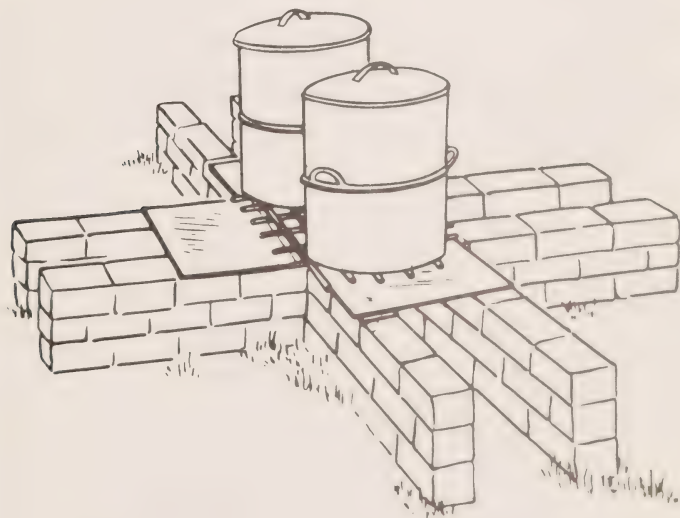
Materials

- (1) Approximately 100 bricks.
- (2) Approximately ten pieces of scrap iron for grate (pipe, angle iron, or $\frac{1}{2}$ inch round pipe).
- (3) Two pieces sheet metal to act as support for grate.

Construction

- (1) Lay four parallel rows of bricks in a cross, so that they intersect at their centres to form a firebox.
- (2) Allow one foot of space between rows.
- (3) Form sidewalls by stacking bricks three-high with mortar in between.
- (4) Lay sheet metal at intersection.
- (5) Place scrap iron over the sheet metal to make a grate.

DIAGRAM V



IMPROVISED ROASTER (Diagram VI)

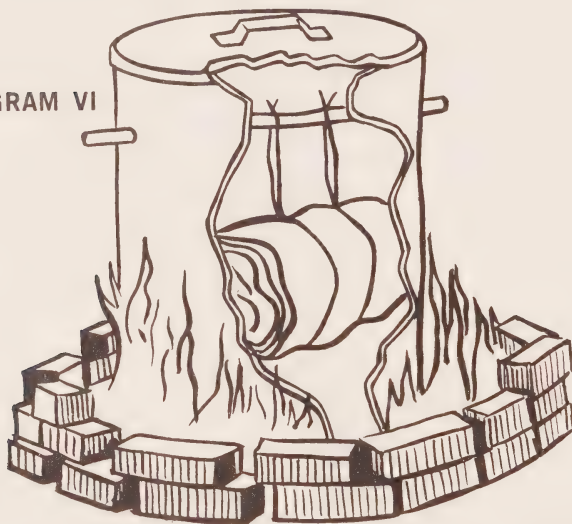
Materials

- (1) One large can with tight fitting cover (institutional-size shortening can).
- (2) Bricks, concrete blocks, or stones to construct sidewalls of a fire pit.
- (3) A length of steel rod, round iron, or heavy wire to be used as a spit.
- (4) A length of fine, strong wire to tie the meat to the spit.

Operation

- (1) Build fire around inside of brick fire pit, allowing space in centre for cooking container to rest on ground.
- (2) Punch a hole for spit on each side of can, several inches below the rim.
- (3) Wrap fine wire around roast several times (or run wire through centre of meat), leaving ends long enough to make a strong loop.
- (4) Run spit through one hole, then slip wire loops over the spit so meat hangs suspended in the can. Run spit through the other end.
- (5) Put cover on can.
- (6) Place container on ground within fire pit and put weight on cover to hold it securely.
- (7) Do not put water in container as meat should cook in its own steam. Meat cooks more quickly in this type of pressurized container. A 20 to 25 lb. piece of beef will cook in two to two and one half hours.

DIAGRAM VI

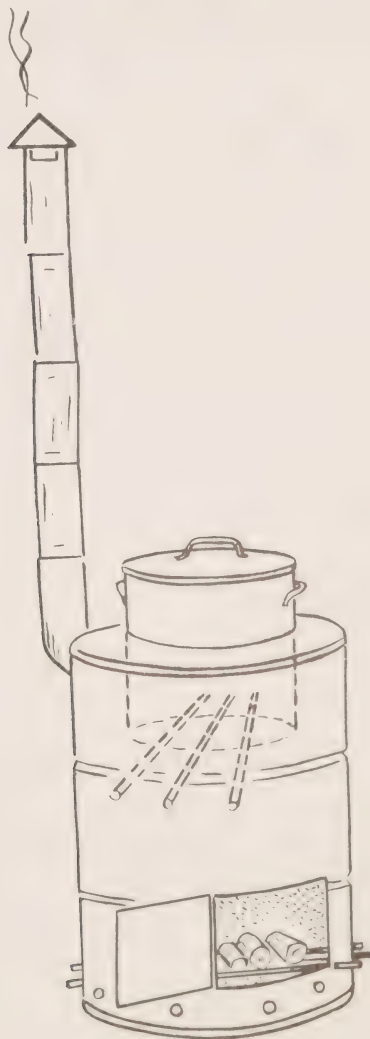


SOYER BOILER (Diagram VII)

Materials

- (1) One 45 gal. oil drum.
- (2) One cooking pot of fairly heavy metal (12-20 gallon capacity).
- (3) Rods or bars for grate.
- (4) Bars to support cooking pot.

DIAGRAM VII



Construction

- (1) Cut a rectangular or round fuel door and fasten it to drum.
- (2) Install a simple grate to hold fuel, about one foot up from bottom of drum.
- (3) Cut off one end plate and hinge it to top, forming a lid.
- (4) Cut out hole for stove pipe just below lid assembly at opposite side of barrel to fuel door.
- (5) If oil and water is used as fuel, provide a metal flash pan.
- (6) Punch several draft holes at base end of drum.
- (7) Insert fixed bars in drum to support cooking pot.
- (8) Handles can be made to facilitate lifting of pot.

Alternate Fuel

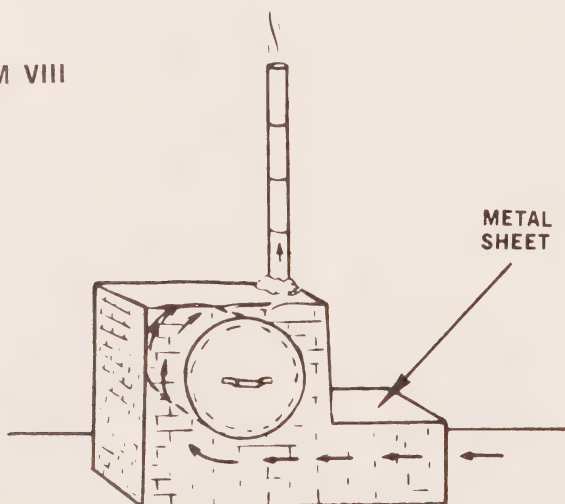
Oil and water drip may be used as source of heat (see page 119) or coal, wood, liquid gas.

HOT PLATE AND OVEN (Diagram VIII)

Materials

- (1) A metal sheet preferably not more than $\frac{3}{8}$ inches thick and approximately four feet by two feet three inches.
- (2) A small grating, grid or perforated sheet of metal for the firebox.
- (3) Bricks and mortar (or stones, concrete blocks, cans filled with earth).
- (4) A 30 gal. garbage can, oil drum, or any large can with a tight fitting lid.

DIAGRAM VIII



Construction

- (1) Mark out on the ground a rectangle two feet three inches by six feet nine inches.
- (2) Wet the ground. Put on thick layer of mortar to the inside of the line, leaving the front (firebox) open.
- (3) Wet the brick. Lay the first row of bricks, putting mortar between each. Lay the second and third layers of bricks, alternating rows by beginning one with a whole brick and the next with a half brick.
- (4) Place metal grating or grid in position for the firebox. Build an inner wall three bricks long at the chimney end to support closed end of the garbage can.
- (5) Fill up space between firebox and chimney end with rubble to form fluebed, finishing off with smooth layer of mortar.
- (6) Lay a thick layer of mortar along the top of the brick work and place metal sheet in position.
- (7) Lay the garbage can with the outer edge of one side in line with the end of the hot plate. Leave at least three inches between can and back wall—closed end of garbage can on inner wall, open end on other wall and projecting around can. Put thick layer of mortar on top of oven section and fill in gap between inner wall of oven section and the can. Place sheet of corrugated iron or steel, with hole punched in for chimney, on top of oven section and cover with thick layer of mortar.
- (8) Erect chimney.
- (9) Build a small fire to set the mortar.

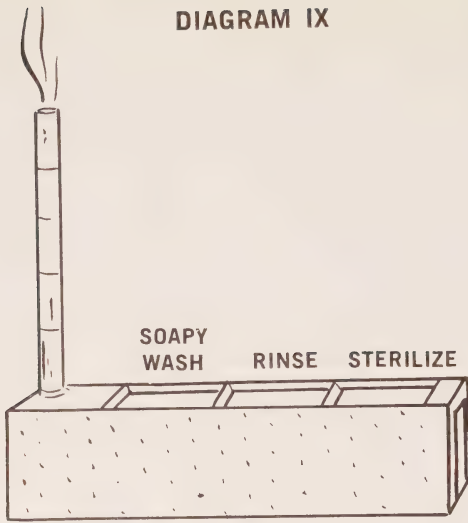
Fuels

Wood, coal, trombone burner (see page 117) or liquid gas.

WASHING AND STERILIZING UNIT (Diagram IX)

The methods of heating and building are the same as for the hot plate. Forty gallon oil drums are burned out, thoroughly scrubbed and cut in half. The half drums are set with mortar and the brick work is built along the sides. The washing is done in the half drum nearest the chimney, rinsing in the middle one and sterilizing in the one over the firebox. One unit will serve for 100 people or three for 500.

DIAGRAM IX



Construction

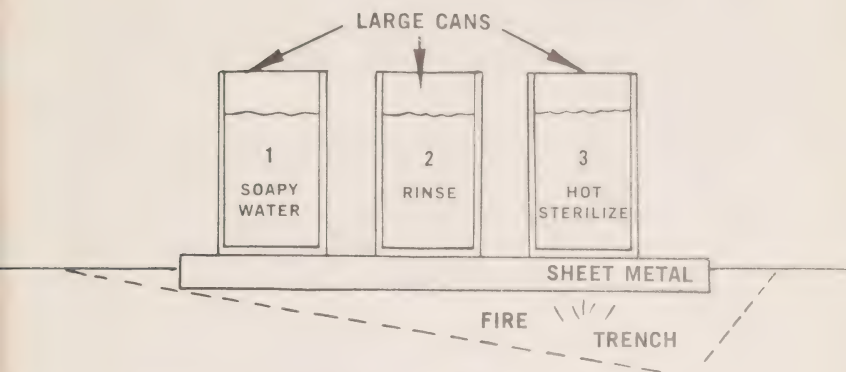
- (1) Outline a rectangle on flat ground four feet 11 inches by nine feet three inches.
- (2) Wet the ground. Put a thick layer of mortar one and one half feet wide around inside edge of rectangle, leaving a one foot 11 inch space at firebox end.
- (3) Wet the brick and lay the first row of bricks one and one half feet wide for walls.
- (4) Oil drums split in half with tops and bottoms removed can serve as windbreaks around each garbage can.
- (5) In winter weather the trench could be built above ground with cement blocks, bricks, tin cans or logs.

Operation

- (1) Wash eating utensils in hot soapy water (1).
- (2) Rinse in hot water rinse (2).
- (3) Rinse in hot sterilizing solution (3).
- (4) Sheet metal should be placed along sides of fire to prevent burning the legs of people washing dishes.

ALTERNATE ARRANGEMENT FOR DISHWASHING UNDER EMERGENCY CONDITIONS (Diagram X)

DIAGRAM X



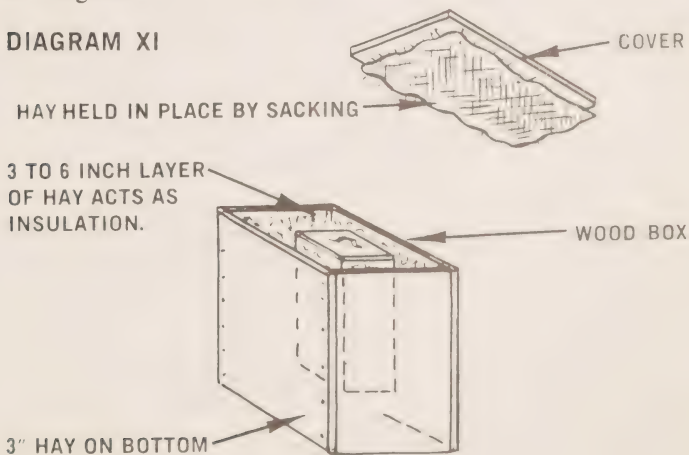
As long as the basic principle of three containers (hot soapy water, hot water rinse, hot sterilizing solution) is followed, any method of heating the containers may be used.

A simple method is to place three large containers (new garbage cans, oil drums cut in half) over a slit trench. The containers may straddle the trench or they can be placed on a piece of sheet metal or on metal bars.

IMPROVISED HAY BOX (Diagram XI)

A hay box can serve as an improvised container as shown in Diagram XI.

DIAGRAM XI



IMPROVISED WATER HEATER (Lazy Man Boiler) (Diagram XII)

Materials

- (1) Oil drum—40 gal., burned and scrubbed.
- (2) Funnel—for cold water inlet.
- (3) Hose or pipe—for hot water outlet.
- (4) Bricks—approximately 200, and mortar.

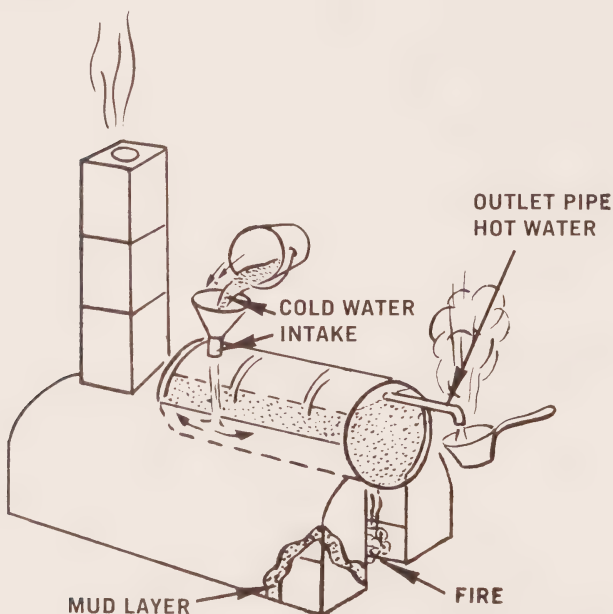
Construction

- (1) Build fireplace as for the hot plate, wide enough to hold the oil drum.
- (2) Drill inlet hole at chimney end of oil drum and insert funnel with pipe extending close to bottom of the drum. Drill outlet hole at front end of drum and insert hose or pipe close to top.
- (3) Cover drum with mortar for insulation.

NOTE:

Hot water can only be drawn off when cold water is poured into the inlet.

DIAGRAM XII



GREASE TRAP AND SOAKAGE PIT (Diagram XIII)

The usual method of disposing of waste water, when improvising in the field, is to get rid of it underground. The water from cooking and washing contains large amounts of grease and soap. No soil will absorb for any length of time, water containing either of these, and some method of removing them must therefore be used.

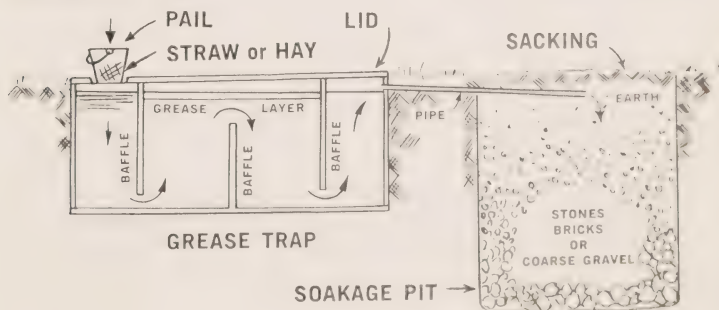
Grease Trap

If water containing fat is allowed to stand, the fat will rise to the surface as a scum. This is especially so if the greasy water is hot and is rapidly cooled by being run into a considerable volume of cold water. If the scum so formed can be retained in a "trap" it can be skimmed from the surface of the water and disposed of by salvage, burning or burying.

The Grease Trap can be improvised with wood, metal or concrete. It consists of a box which should be as nearly watertight as possible. It is long, narrow, and deep in shape with three baffle plates. The baffle plates should be easily removable for cleaning. The bulk of the grease will collect in the central area of the trap and the largest such trap should not have a greater capacity than 300 gallons. If this is not sufficient to handle the amount of liquid to be processed, then a second trap should be constructed and placed so that the first one overflows into the second.

A strainer is essential at the entry into the trap. A tin can or pail with the bottom perforated and filled with straw or hay will serve to catch the larger particles of grease and fat. This can be removed and burned as it becomes clogged. If the trap is in operation over a period of time the grease should be removed daily and the whole trap emptied and cleaned thoroughly once a week.

DIAGRAM XIII



The Soakage Pit

Once the grease and soap have been removed from the waste water, the water usually is disposed of by means of soakage pits (except where the soil is of clay or rock and non-porous).

The overflow from the grease trap can run directly into the soakage pit. This excavation, four feet deep and four feet square or larger, is filled with stones, broken bricks, or very coarse gravel—with the larger pieces at the bottom. The top of the pit is covered with matting or sacks. The soakage pit should be at least 25 feet from the kitchen area.

WASTE OIL

Waste (Derv) oil has proven an excellent fuel in heating the improvised units already described. The following two methods are recommended for use by *experienced* feeding teams.

THE TROMBONE BURNER (Diagram XIV)

It is light, portable, and easily erected by the experienced worker. It can burn Derv oil, or gasoline.

The principles of this burner are:

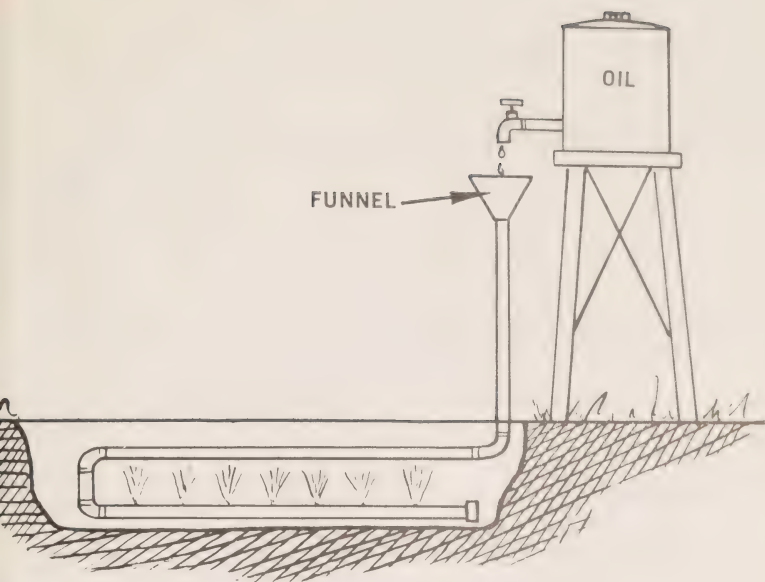
Gravity feed.

The preheated pipe creates gas by its own heat.

Materials

- (1) Galvanized iron pipe (length of piping will vary according to need and to material available):
 - (a) One piece $\frac{3}{4}$ inch pipe five feet long for vertical pipe.
 - (b) One piece $\frac{3}{4}$ inch pipe nine feet long for top horizontal pipe.
 - (c) One piece $\frac{3}{4}$ inch pipe eight feet long for bottom horizontal pipe.
- (2) Pipe Fittings:
 - (a) Three elbows $\frac{3}{4}$ inch.
 - (b) One nipple $\frac{3}{4}$ inch by six inches.
 - (c) One plug $\frac{3}{4}$ inch.
- (3) One metal container with drip valve.

DIAGRAM XIV



Construction

- (1) Join pipe, elbows, nipple and plug as shown in diagram.
- (2) Fix pipe to tank itself.
- (3) Fix control cock.
- (4) Drill $1/32$ inch holes in lower horizontal pipe, located so they will be under cooking container. Use hand drill.

Operation

- (1) Place horizontal pipes in a trench or built up enclosure.
- (2) Open drip valve of metal container, allow oil to flow through small holes in bottom horizontal pipe and cover bottom trench.
- (3) Close control cock.
- (4) Ignite oil in trench so that it will preheat top horizontal pipe to the point that it will vapourize oil.
- (5) Open control cock.
- (6) Oil will vapourize as it contacts top horizontal pipe. Vapourized gas will escape through small holes of bottom pipe and be ignited. Result is a flame similar to that of a blow torch.

Requirements

One per 100 group unit.

Three per 500 group unit.

OIL AND WATER DRIP (Diagram XV)

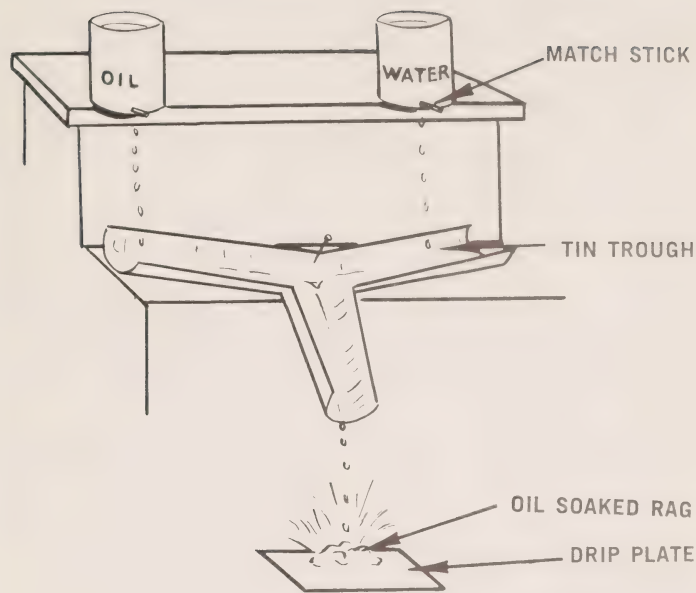
Materials

- (1) A filter is needed if waste oil is to be used.
- (2) Tin plate or lid needed as flash pan, to catch oil and water drip.
- (3) Two metal cans (one for oil and one for water).

Operation

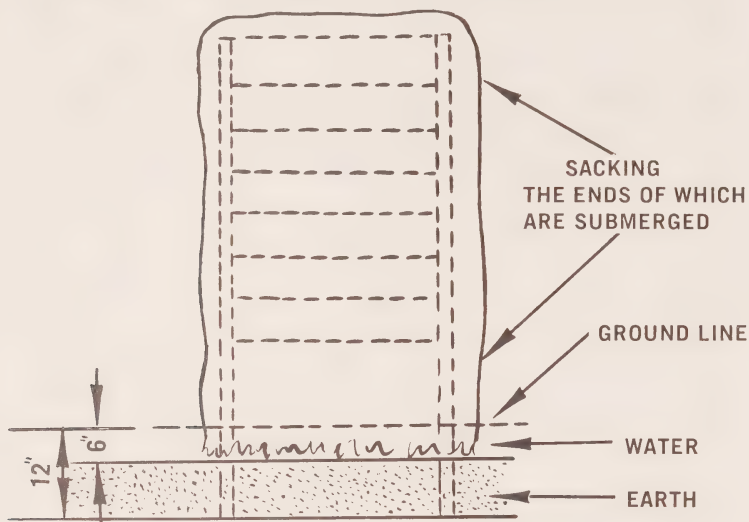
- (1) Puncture one tiny hole in each of the two cans, and plug holes with match sticks.
- (2) Put the fuel oil or waste oil, which has been filtered, into one can. Fill the other can with water.
- (3) Place cans on one end of T-shaped drip trough, and stand on a support (bricks or a can) about 18 inches from the fire-box and four inches above the top of fire-box.
- (4) Soak a rag in oil and place it in flash pan. Set flash pan in a fire-box and ignite rag. Allow it to burn for a minute or two until pan is warm. The steady drip of oil and water down the trough hits the hot drip plate and creates a continuous flame.
- (5) After a few minutes, the flame may be regulated by increasing or decreasing the rate of drip. Too much oil will result in an unnecessary heavy soot. Two or three parts of oil to one of water is usually a satisfactory proportion. Experience will give the best guidance. A continuous crackling noise will be heard from the flash pan.
- (6) It may be necessary to cut down draught by partially covering the opening to the fire-box with a piece of sheet metal.

DIAGRAM XV



Two possibilities are illustrated below.

DESERT COOLER (Diagram I)



Materials

- (1) Orange crate, box, or four uprights with shelves.
- (2) Fly proof netting.
- (3) Burlap or cheesecloth to cover.

Construction

- (1) The box may be made with legs 12 inches below the bottom shelf. The cooler is then placed in a 12 inch hole which is filled with water. The sacking is dampened and will absorb water from the hole. Air blowing through the damp sacking will cool the interior.
- (2) Other methods may be used such as:
 - digging a shallow trench around the cooler, filling the trench with water and hanging the sacking in the trench.

- suspending a water can with a tap above the cooler so water can drip on the sacking.
 - gathering the material at the top of the box, placing the gathered end in a pan of water, and placing a stone or other weight on the material to hold it securely. The rest of the material should be draped around the box, leaving a small opening.
- (3) The size will depend upon the requirements. An average cooler could be five or six feet high, four feet wide, and three feet deep.
- (4) The cooler may be suspended to protect the contents from animals.

REACH-IN PIT COOLER (Diagram II)

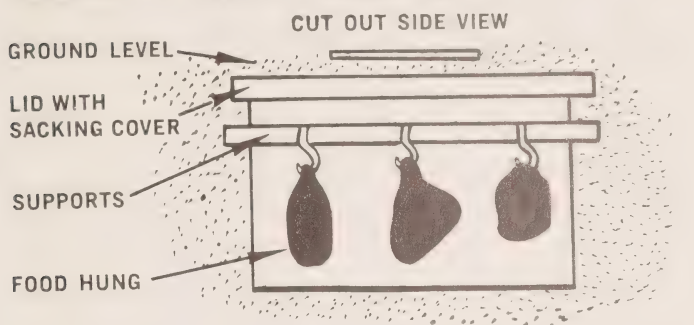
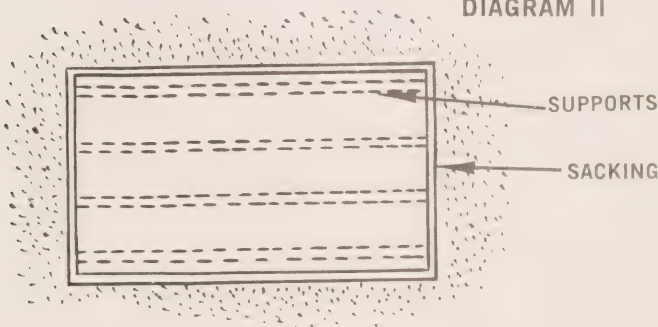


DIAGRAM II



Construction

- (1) The Pit Cooler or Hole in the Ground should be dug in a shady spot, if possible, and should be at least four feet square and five feet deep.
- (2) The cover should fit as tightly as possible.
- (3) The sides of the pit may be lined with boards, tin, clean sacking, or branches.
- (4) The sacking on the lid must be soaked in water at intervals.

Other Methods of Cooling

- (1) Place water tight containers in running stream.
- (2) Surround containers with water-soaked newspapers.

CONTAINERS FOR PREPARATION AND TRANSPORTATION OF FOOD

Many commonly used and widely available types of containers can be used for the emergency preparation and transportation of food. For example:

- (1) *For Boiling Water*—new garbage cans, wash boilers, wash tubs, milk cans, oil drums, large preserving kettles, pails, and large shortening or jam cans.
- (2) *For Cooking Food*—any container made of tin, aluminum, enamel, or stainless steel. Already cooked food may be heated in large roasting pans or in baking pans in ovens.

Note:

Galvanized containers should never be used for food or beverage preparation because of danger of poisoning from the coating.

- (3) *For Transporting Hot Food and Liquids*—commercial insulated containers and covered containers such as large stock pots, milk cans, pails (not galvanized), crocks, dish pans, large shortening or jam cans could be packed in Hay Boxes or wrapped in newspapers or blankets.
- (4) *For Transporting Sandwiches and Bread*—new garbage cans, wooden boxes, tubs, pails, dish pans, and clothes baskets lined with clean paper or cloths.

EMERGENCY HOSPITAL REQUISITION FORM

ORIGINAL

ORIGINAL

TO:

FROM: AREA OR WARD

REQUISITION NO.

ROOM NO.

DATE _____

TIME

REQUEST FOR: () Sterile Goods () Ward Equipment () Expendable Supplies () Diet () Others (A separate requisition is required for each class of the above-mentioned supplies.)

[illegible]

ORDERED BY: _____
(Signature of M.D. or Charge Nurse)

SEE REVERSE SIDE FOR DISTRIBUTION

(1) Prepare in duplicate

(2) Retain dupli

(3) Forward original for supplies

KITCHEN SUMMARY SHEET

DATE _____

[illegible]

EMERGENCY HOSPITAL

WARD DIET LIST

DATE

WARD

		DIET TO BE SERVED					
BED	PATIENT'S NAME	REGULAR	SOFT	LIQUID	INFANT FORMULA	SPECIAL	EXTRA NOURISHMENTS

FEEDING IN CIVILIAN ADVANCED TREATMENT CENTRES, EMERGENCY CLINICS AND BLOOD SHADOW DEPOTS

The EF Service would be responsible for feeding in these three Emergency Health Services units.

CIVILIAN ADVANCED TREATMENT CENTRES

Location

These pre-packaged units would be set up in suitable buildings close to the damaged areas.

Capacity

They would be capable of providing primary treatment to 500 casualties over a period of 36 to 48 hours. There would be about 70 staff per 12 hour shift.

Type of Food Required

Three general types of food would be suitable:

- (1) Fruit drinks.
- (2) Hot drinks.
- (3) Emergency type meals for staff and for some casualties being held for a short time.

Equipment and Supplies

Because of their probable isolated location, it is planned to stockpile certain feeding equipment and supplies with the ATC. If the EF Service in undamaged communities could not immediately send prepared food forward, an ATC would be self-sufficient for a short period.

Proposed equipment and supplies for each ATC will include the following:

- (1) Two propane gas hot plates (two burners each).
- (2) Cylinders of propane gas
- (3) Six pots (12 quart capacity each, for beverage preparation and for reheating prepared food sent to the ATC).
- (4) Two ladles.
- (5) Paper cups.
- (6) Ten, five gallon water containers (to be filled with water when mobilized).
- (7) Beverage ingredients.

- (8) 1000 calorie packaged rations for staff for 24 hours (for “stand by” use).

EF Staff

One EF worker per shift would be required in each ATC for continuous preparation of beverages.

Method of Feeding

It is likely that the places selected for setting up ATC s may have either no cooking facilities or very inadequate ones. Therefore, one of the following arrangements for feeding would be necessary:

- (1) A Mobile EF Team from a nearby Welfare Centre could be sent to the ATC to prepare and serve food.
- (2) Prepared hot food could be sent to the ATC by a mobile canteen from an undamaged community.
- (3) Under extreme emergency conditions, cold foods could be sent to the ATC. These could be supplemented by hot beverages made on the hot plates which would be there.

EMERGENCY CLINICS

Location and Function

These units would be located in suitable buildings in reception communities—if possible near an existing hospital.

In the immediate emergency period, minor casualties would be treated on an out-patient and home care basis. Later, they would have the capability of treating all patients in the local community except those severely ill.

Feeding Responsibilities

The EF Service would be responsible for providing one meal for each of the 1000 casualties expected over a 48-hour period, and continuous meals for about 50 workers.

Type of Food Required

- (1) Regular emergency type meals would be adequate for staff and most patients.
- (2) For those patients unable to take solid foods, soup should be available.

Method of Feeding

Cooking and serving facilities will vary with the type of building used for an Emergency Clinic.

If cooking facilities are adequate, meals would be prepared and served on the premises. If facilities were lacking or inadequate, one of the following arrangements for feeding could be made:

- (1) Food could be prepared in another feeding establishment or Auxiliary Kitchen and transported to the Emergency Clinic to be reheated (if necessary) and served.
- (2) An improvised kitchen could be set up in the building if space permitted, or additional equipment could be installed to supplement the existing facilities.
- (3) The staff on duty could eat in shifts in a nearby existing feeding establishment (e.g. restaurant, hotel, church hall).

BLOOD SHADOW DEPOTS

The EF Service would arrange for the feeding of Blood Shadow Depot personnel as required. About 200 workers would be attached to each Depot.

WATER SUPPLY

Recommendations regarding the safety of water in an emergency would normally be provided by municipal Health or Water Department officials. However, EF workers should have a general knowledge of the problems which might arise and the measures required to provide a safe water supply in case they should be working in areas outside organized urban communities.

CHOOSING A SOURCE

Water sources should be chosen in the following priority:

- (1) Use approved public water systems to the fullest extent.
- (2) As a second choice, use existing springs or wells. The quality of water from the ground is usually better than that of surface water.
- (3) If public or ground sources are not available, use surface water sources such as rivers, streams, lakes or ponds, in that order.

PRECAUTIONS WHEN USING SURFACE SOURCES

The following precautions must be kept in mind:

- (1) Take the water from a point well above sewer discharges.
- (2) Avoid places where refuse piles or dumps drain into the water.
- (3) Avoid oily areas as the unpalatable taste cannot be removed by disinfection.
- (4) Avoid areas where there may be drainage from improvised toilets.
- (5) Choose the clearest water possible because it will be more acceptable after disinfection. However, clearness is no guarantee of water safety.

METHODS OF PURIFYING WATER

All water for drinking and cooking should be treated if it is obtained from surface sources or if the safety of other sources is doubtful. Use one of the following methods:

(1) *Boiling*

Boil water for ten minutes.

(2) *Emergency Chlorination*

Treat water with any household bleaching solution containing hypochlorites, which can be obtained from most grocery stores. Refer to the following table for quantities to use.

DISINFECTION OF WATER¹

GALLONS OF WATER	DOSAGE OF DISINFECTING COMPOUNDS			
	Concentrated Javel Water ²		Water Purification Tablets	
	3 to 5%	12%		
	Clear Water	Turbid Water	Clear Water	Turbid Water
1 gal.	drops 4	drops 10	drops 1	drops 2
2 gals.	8	20	2	5
3 gals.	12	30	3	6
	To purify these amounts of clear water use in accordance with directions on container label			

4 gals.	16	40	4	8
5 gals.	20	50	5	16
25 gals.	—	—	25	50

For turbid water double
the quantity of tablets

Approximate Dosage Parts per million

1	2.5	1.2	2.5
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¹ From "Family Health Planning For Disaster", Emergency Health Services Division, Department of National Health and Welfare.

² There are many brands of concentrated javel water available. If they differ from the above percentages check the container label for directions regarding the correct dilution.

Method

Add the solution to the water. Mix thoroughly and allow to stand for 30 minutes. After this time the water should have a slight chlorine taste. If this taste is not present, repeat the dosage and allow the water to stand for another 15 minutes.

RADIOACTIVE CONTAMINATION OF WATER, FOOD AND EQUIPMENT

One of the serious problems which may face EF personnel is the contamination of water, food and equipment by radioactive fallout.

Follow these safety precautions:

WATER

- (1) Have water checked by radiological personnel or Health Department officials if there is any possibility that it has been exposed to radioactivity.
- (2) Remember that boiling or disinfecting does not remove radioactive material from water.

FOOD

- (1) Sealed or unbroken packages, cans, or jars of food from contaminated areas must be cleansed carefully to remove radioactive contamination. Be careful to avoid contaminating the contents when removing from the containers. Have the food monitored to ensure its safety.
- (2) Do not use fresh produce from gardens and fields in contaminated areas, unless absolutely necessary, until they have been declared safe by qualified personnel.

EQUIPMENT

- (1) Wash contaminated equipment in detergent in separate containers from other equipment.
- (2) Dispose of the wash water and cleaning cloths outside the feeding area. Get advice on their disposal from radiological or Health Department officials.

HELPFUL HINTS FOR FOOD PREPARATION IN EMERGENCY

- (1) Keep plenty of boiling water on hand — especially for outdoor feeding.
- (2) Use proper equipment for the job, if possible.
- (3) Cook root vegetables in skins whenever possible. If there is not enough water to wash vegetables adequately, use them unpeeled in soups and stews.
- (4) Do not slice or shred vegetables and fruits. Cut them in wedges or quarters for cooking. Leave whole or cut in halves if serving raw. Cut onions in quarters and slip skins off.
- (5) Whenever possible, use assembly line method for mass production.
- (6) Soak dried fruits and eliminate cooking.
- (7) Cook vegetables and fruits just long enough to make them tender.
- (8) When cooking soups or stews, first cook the ingredients that take the longest time. Add the others according to length of cooking time required. Add ingredients that need only heating or cooking at low temperatures, such as milk, butter, eggs, and canned vegetables just before serving.
If space on top of the stove is limited, cook stews slowly in an oven in a small amount of water.
- (9) Thicken and extend mixtures by adding barley, bread crumbs, cornmeal, cornflakes, rolled oats, macaroni, rice, tapioca, or flour.
- (10) Shape minced meat patties with ice cream scoops, then flatten, or cook in a pan and cut into squares after cooking.
- (11) Dilute evaporated milk with an equal quantity of water for the equivalent of whole milk.
- (12) Add one eight ounce cup of skim milk powder to one quart of water for the equivalent of one quart of fresh skim milk.
- (13) If skim milk powder is used in cooking or baking, mix it with the other dry ingredients in the recipe, rather than reliquifying. Then add the water as liquid in the recipe.

SANDWICH MAKING

SANDWICH FILLINGS

Because refrigeration may be limited, salad dressings should not be used, and sandwiches should be served within a short time after preparation.

Instead of salad dressings, sandwich mixtures may be moistened with pickles, relishes, vinegar, lemon juice, olives, catsup, or chili sauce.

AMOUNTS FOR 100 SANDWICHES

Ingredients	Amount
Bread	200 slices (approx. 9, 1½ pound loaves)
Butter or margarine	1½ pounds for spreading 1 slice of the sandwich; double this amount for spreading both slices.
Sliced cheese	6 to 8 pounds (12 to 16 slices per pound)
Sliced meat	10 pounds (10 to 20 slices per pound)
Peanut butter	7 pounds
Mixed fillings	4 quarts

EQUIPMENT

Spatula or spreader with blade long enough to reach across a slice of bread, portion scoops, knives for slicing or chopping, forks for picking up slices, can openers, mixing bowls, spoons, and trays should be available.

PROCEDURES FOR SANDWICH MAKING

In setting up the work area, allow plenty of table space and adjust the work surface to the proper height for the comfort of the workers. Arrange the supplies and equipment within easy reach. Keep work surfaces clean.

The following procedures are recommended:

Bread Assembly

- (1) Leave wrappers on bread until ready to use.
- (2) Open wrapper by slitting through middle of loaf with knife.
- (3) Remove wrapper from half a loaf at a time.
- (4) Place half loaves, open side down, on tray.

Preparation of Filling

- (1) Cream butter or margarine in advance. One half cup of milk may be added gradually to each pound of butter or margarine to make it creamy and to extend it.
- (2) Use easy-to-spread fillings or sliced ingredients to save time.
- (3) Cross-stack sliced ingredients for easy pickup.
- (4) Keep fillings refrigerated until ready to use; prepare only in quantities that can be used during one serving period.

Care of Sandwiches

- (1) Label sandwiches in groups to show kind of filling, date, and hour made. This information will determine the time beyond which the sandwiches should not be served.
- (2) If sandwiches are not wrapped individually in wax paper, they may be kept fresh as follows:
 - (a) Place a damp towel on the bottom of a flat pan, tray, kettle, or pail; place wax paper over the damp towel. (Do not use cardboard boxes for storing sandwiches. The cardboard is an insulator which prevents sandwiches in the middle of the box from reaching a low temperature quickly.)
 - (b) Stack the sandwiches and cover with wax paper.
 - (c) Place a damp towel over the wax paper, being sure that the sandwiches are completely covered.
 - (d) Store in cool place.

Assembly Line Methods

- (1) *Method No. 1* (using two or more workers)
 - (a) Arrange slices of bread in rows on the work surface.
 - (b) Working from top to bottom and from left to right, spread the butter to all edges on one side of the bread.
 - (c) Put the filling on alternate slices of bread, making one stroke of the spreader away and one stroke towards the worker to spread the filling evenly.
 - (d) Put the slices together. Sandwiches should be left whole to save time in production and for easier eating.

- (e) A second worker to the right of the first worker (using a pharmacist's fold) can wrap, stack, label, and store the sandwiches.

(2) *Method No. 2* (using five or more workers)

The total preparation requires five to seven workers along one side of a table. The following diagram shows the position of the workers, their duties and the flow.

Line starts with Position 1

Position 1	Position 2	Position 3	Position 4	Position 5	Position 6	Position 7
Cuts wax paper and places bread	Spreads butter	Places filling	Spreads filling	Puts slices together	Wraps sandwiches	Labels, stacks and stores

A double assembly line may be formed by adding four or five more workers to form a matching line on the opposite side of the table.

The worker in the No. 1 position would be placed at the head of the table, facing both lines. This person would slide the bread alternately to the No. 2 Positions on either side of the table.

The No. 7 Position would be placed at the foot of the table to collect, stack, and label the wrapped sandwiches from both sides of the line.

WEIGHTS, MEASURES AND EQUIVALENTS

**NUMBER OF SERVINGS FROM VARIOUS SIZED
CANS AND PACKAGES**

Size of Can or Package	Number of Servings	Size of Serving
14 ounce main dish	2	1 cup (8 fluid ounces)
14 ounce fruit or vegetable	3-4	½ cup (4 fluid ounces)
19 ounce main dish	2½	1 cup
19 ounce fruit or vegetable	4-5	½ cup
28 ounce main dish	3½	1 cup
28 ounce fruit or vegetable	6-7	½ cup
100 ounce fruit or vegetable	20-25	½ cup

Fruit Juice

19 ounce	5	½ cup
48 ounce	12	½ cup

Soups

10 ounce (when diluted)	2-3	1 cup scant
48 ounce (when diluted)	12	1 cup

Cereals

8 ounce, ready to eat	8	¾ cup - 1 cup
12 ounce, ready to eat	17	¾ cup
12 ounce, shredded wheat	12	individual servings

Breadstuffs

1 pound soda crackers	100-120 crackers	varies
1 loaf bread (1½ pound loaf)	22 slices	varies
1 pound package cookies	30-40 cookies	varies

MISCELLANEOUS HINTS

Useful Weights

- One large bag flour weighs 98 pounds
- One large bag sugar weighs 98 pounds
- One bag potatoes weighs 75 pounds (Wastage during peeling is approximately 4 pounds in every 25 pounds potatoes)
- Root vegetables usually come in 50 pound bags
- Cabbage usually comes in 50 pound bags
- One box apples usually weighs 40-42 pounds
- One case oranges weighs 75 pounds (number of oranges varies according to size)
- One box dried fruit usually weighs 25-30 pounds
- One half ounce of butter or margarine is roughly a square $1\frac{1}{4}" \times 1\frac{1}{4}" \times \frac{1}{2}"$
- A large cheese usually weighs 30 pounds
- One ounce of cheese is roughly a cube one inch square
- A large pail of jam weighs 30 pounds
- One ounce of jam is roughly $1\frac{1}{2}$ tablespoons
- A large pail of peanut butter usually weighs 25 pounds
- One ounce of peanut butter is roughly 2 tablespoons
- One case eggs contains 30 dozen

Capacity of Containers

- A five gallon pot will serve approximately 75-80 one cup servings of beverage or soup (pot $\frac{3}{4}$ full).
- A two gallon pot will serve approximately 30-35 one cup servings of beverage or soup.

Useful Measures

- One quart (40 fluid ounces or five - 8 ounce cups) unsifted flour weighs $1\frac{1}{4}$ pounds.
- One quart sugar weighs 2 pounds.
- Two and one half cups butter or margarine in 1 pound.
- One quart grated cheese weighs 1 pound.
- One quart cocoa weighs 1 pound.
- One quart raw macaroni weighs $1\frac{1}{4}$ pounds.
- One quart raw rice or barley weighs $2\frac{1}{2}$ pounds.
- One quart raw rolled oats weighs 1 pound.
- One quart raw cream of wheat weighs 2 pounds.
- One quart dried beans weighs 2 pounds.

RECIPES

ABBREVIATIONS USED IN RECIPES

A.P. — As purchased

E.P. — Edible portion

EQUIVALENTS

3 teaspoons	1 tablespoon
16 tablespoons	1 cup
2½ cups (8 oz. cup)	1 pint
2 pints	1 quart
4 quarts	1 gallon
1 pint	20 fluid ounces
1 quart	40 fluid ounces
1 quart	5 cups

The recipes selected contain a minimum number of ingredients and require only simple equipment. Most women would know how to prepare any of these items. Amounts are for 100 servings. For larger amounts, results should be satisfactory by multiplying the recipes for 100 by the unit desired.

Water may be substituted in these recipes for meat stock if it is not available, but in this case additional seasoning may be required. If available, dehydrated soup bases or bouillon cubes may be used as stock for soups.

CEREALS

ROLLED OATS CEREAL

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients

Amount

Boiling water

5½ gallons

Salt

1 cup

Rolled Oats

2½ gallons

Method:

1. Add salt to boiling water and bring to a vigorous boil.
2. Add rolled oats, stirring constantly until thickened.
3. Continue to cook over low heat, stirring occasionally until done (30-40 minutes).

CREAM OF WHEAT CEREAL

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients	Amount
Cream of wheat	3½ quarts
Salt	10 tablespoons
Boiling water	5½ gallons

Method:

1. Add salt to water and bring to a vigorous boil.
2. Add cereal slowly.
3. Continue to cook over low heat, stirring occasionally until done (30-40 minutes).

SOUPS

BEAN SOUP WITH WIENERS

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients	Amount
Baked beans	10-19 ounce cans
Celery, diced	2 medium bunches
Onions, chopped	10 medium (2½ lb. A.P.)
Tomatoes	6-28 ounce cans
Water	12 quarts
Butter	3 cups (1½ lbs.)
Flour	3 cups
Pepper	1 teaspoon
Salt	2 teaspoons
Wieners, sliced	8 pounds

Method:

1. Mash beans. Add celery, onions, tomatoes and water.
2. Bring mixture to a boil and cook for one-half hour.
3. Melt butter and add flour to make a smooth paste.
4. Stir the flour paste into the hot soup and cook until thickened. Stir constantly.
5. Add sliced wieners, and continue to cook until wieners are heated through.
6. Season to taste.

RICE AND TOMATO SOUP

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients

Amount

Hot stock	3½ gallons
Raw diced onions	1 pint (¾ lb.)
Raw diced carrots	1 pint (¾ lb.)
Raw diced celery	1 pint (1 bunch)
Raw rice	1½ pints (1¾ lbs.)
Canned tomatoes	1½ gallons
Salt	½ cup
Sugar	½ cup

Method:

1. Combine stock, vegetables and rice. Cook for 1 hour.
2. Add tomatoes, salt and sugar. Cook for another 10 minutes.

VEGETABLE SOUP WITHOUT STOCK

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients

Amount

Carrots, diced	3 quarts
Potatoes, diced	3 quarts
Tomatoes	6 quarts
Water	8 quarts
Onions, chopped	3 quarts
Fat	4 cups
Cabbage, chopped	6½ quarts
Salt	3 tablespoons
Peas	4-19 ounce cans

Method:

1. Mix all the vegetables except peas, onions and cabbage, in water.
2. Boil gently until vegetables are nearly tender.
3. Brown onions in fat.
4. Add onions, fat and cabbage to the other vegetables and cook about 15 minutes longer.
5. Season.
6. Add peas and serve before vegetables are soft.

QUICK VEGETABLE SOUP

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients	Amount
Canned corn	16-19 ounce cans
Canned peas	8-19 ounce cans
Canned tomatoes	12-28 ounce cans
Salt	5 tablespoons
Pepper	4 teaspoons
Butter or margarine	1 cup
Onions, chopped	4 cups
Bread, cubed	4 quarts

Method:

1. Combine canned vegetables. Bring to boil.
2. Add salt and pepper.
3. Partially cook onions in butter or margarine.
4. Add to vegetables.
5. Add bread cubes.
6. Serve hot.

MAIN DISHES

MEAT AND VEGETABLE STEW

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients	Amount
Lean boneless stewing beef	25 pounds
Raw, diced onion	1 gallon (6 lbs.)
Renderings from pan	1½ pints
Unsifted flour	1½ quarts
Boiling water	3 gallons
Raw vegetables	7 quarts (10 lbs.)
Salt	½ cup
Pepper	2 teaspoons

Method:

1. Cut the meat into 1" cubes.
2. Place in greased baking pans; brush with fat.
3. Braise for 1 hour in a moderate oven or brown on top of the stove, stirring as required.
4. Add finely chopped raw onions and cook with the meat for 10 minutes.
5. Lift the meat and onions from the pan, leaving the renderings.

6. Measure the renderings — there should be 1½ pints. If there is less than this, add the necessary quantity of the same kind of fat to make up to this amount.
7. Add the flour and seasonings to the fat and blend well. Cook for one or two minutes.
8. Add the hot water slowly, stirring while adding. Boil for two or three minutes.
9. Pour over the meat and onions.
10. Add cubed raw vegetables.
11. Cover closely. Simmer in a slow oven, on top of the stove or in a steam jacketed kettle until the meat and vegetables are tender.

Note:

1. If a mincer is available, meat could be ground to save preparation and cooking time. If water is scarce, use canned tomatoes or tomato juice as a substitute. Lamb or veal stew may be made the same way, but the meat requires no braising.
2. If the kitchen is mobile or if the stew is to be reheated, omit the flour from the recipe to prevent scorching and fermentation.

MACARONI WITH TOMATOES AND MEAT

Yield: 100 servings

Size of serving: 13 ounces

Ingredients

Amount

Diced raw meat	25 pounds
Sliced onions	1½ quarts (2 lbs.)
Raw macaroni	6 quarts (7½ lbs.)
Flour	1 quart
Salt	6 tablespoons
Pepper	2 tablespoons
Canned tomatoes	2½ gallons
Stock	2½ gallons

Method:

1. Braise the meat and onions together in a moderate oven.
2. Add macaroni gradually to boiling salted water. Boil until tender (about 20 minutes).
3. Strain and rinse.
4. Add the flour, salt, pepper, canned tomatoes and stock to meat and onions.
5. Cook until meat is tender and mixture thickened.
6. Add the cooked macaroni and reheat.

MACARONI AND CHEESE

Yield: 100 servings

Size of serving: 7 to 8 ounces

Ingredients

Amount

Macaroni	5 quarts
Fat	2½ cups
Flour	4½ cups
Milk	6 quarts
Salt	6 tablespoons
Pepper	1 teaspoon
Mustard	1 tablespoon
Cheese, grated	4½ quarts

Method:

1. Add macaroni slowly to rapidly boiling, salted water, stirring constantly.
2. Boil vigorously until tender (15-25 minutes).
3. Drain and rinse.
4. Make a cream sauce of the fat, flour, seasonings and milk.
5. Cook slowly, stirring occasionally until no flavour of raw starch remains.
6. Add grated cheese and continue cooking until cheese is melted.
7. Combine macaroni and cheese sauce and reheat.

SPANISH RICE

Yield: 100 servings

Size of serving: 7 ounces

Ingredients

Amount

Rice	2½ quarts (6 lbs.)
Water	1½ gallons
Fat	1 pint
Sliced onions	1½ quarts (2 lbs.)
Canned tomatoes	2 gallons
Salt	½ cup
Pepper	2 tablespoons
Grated cheese	1½ gallons (6 lbs.)

Method:

1. Add rice to hot water and boil for 20 minutes. Drain.
2. Melt fat, add sliced onions and cook for 10 minutes.
3. Combine all ingredients, including fat in which onion was cooked.
4. Bake in a moderate oven ½ hour or longer.

Variations

1. Add 3 pounds diced cooked bacon.
2. Reduce rice by $\frac{2}{3}$ quart and add 7 pounds diced, cooked meat.

CORNED BEEF HASH

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients

Amount

Minced raw onions	2 quarts (1½ lbs.)
Fat	1 pint
Mashed potatoes	3½ gallons (40 lbs. AP)
Minced corned beef	3 gallons (18 lbs.)
Salt	5 teaspoons
Pepper	to taste

Method:

1. Cook the minced onion in the fat until tender.
2. Combine the potatoes, minced meat and cooked onion.
3. Add salt and pepper to taste.
4. Spread 2 inches to 3 inches deep in heavy, greased baking pans.
5. Bake in a hot oven until heated through and the under surface is well browned.
6. Cut into portions and serve with the browned side up.

MEAT AND VEGETABLE STEW (Canned Ingredients)

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients

Amount

Canned meat	20 pounds
Potatoes	10 pounds
Onions	6 pounds
Canned tomatoes	5-19 ounce cans, or 1-100 ounce can
Canned beans, peas, carrots, corn	10-19 ounce cans, 5 of each, or 2-100 ounce cans (total)
Flour	$\frac{3}{4}$ -1 pound (approx.)

Method:

1. Place quartered potatoes and onions in stock pot. Cook until tender.
2. Add canned vegetables (including all liquid).

3. Make a thin paste of flour and water. Stir into stew and simmer until thickened.
4. Add meat, cut or broken into bite sizes.
5. Add salt and pepper to taste.

SHEPHERD'S PIE

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients	Amount
Fat	½ pint
Minced raw onions	1 quart (1½ lbs.)
Minced cooked meat	2½ gallons (25 pounds)
Salt	3 tablespoons
Pepper	1 teaspoon
Stock, gravy, tomato juice or canned tomatoes	2 quarts
Hot mashed potatoes	2½ gallons (35 lbs. A.P.)

Method:

1. Cook onions in fat until tender.
2. Combine the cooked onions with the meat, salt, pepper and tomato juice or stock.
3. Spread in baking pans and heat.
4. Cover with mashed potatoes.
5. Brush surface with fat and brown in the oven.

MEAT LOAF

Yield: 100 servings

Size of serving: 4 ounces

Ingredients	Amount
Eggs	18
Chopped onion	6½ cups
Rolled oats	12 cups (2 quarts & 2 cups)
Tomato juice, milk or water	6½ cups (1 quart & 1½ cups)
Salt	6 tablespoons
Pepper	5 teaspoons
Ground beef	17 pounds

Method:

1. Beat eggs.
2. Add chopped onions, rolled oats, liquid, salt and pepper. Mix thoroughly.
3. Add meat. Mix thoroughly.
4. Bake in greased pan at 350°F. approximately 1 hour and 45 minutes.

Variations

One of the following may be substituted for an equal quantity of meat:

4 pounds green peas	8 pounds cubed cheddar
4 pounds cooked diced	cheese
carrots	8 pounds cooked macaroni

SWISS STEAKS

Put 25 pounds steak (hip or chuck) in layers, with flour and salt in between, raw onions and canned tomatoes poured over. Cook in oven or in stock pot.

CHILE CON CARNE

Yield: 100 servings

Size of serving: 1 cup (8 ounces)

Ingredients

Amount

Hamburger	20 pounds
Onions	6 pounds
Canned Tomatoes	3-100 ounce cans
Canned Red Kidney Beans	20-19 ounce cans
Salt	to taste
Chile Powder	1 cup (or as desired)

Method:

1. Brown hamburger with onions.
2. Add canned tomatoes and canned beans.
3. Cook until well blended.
4. Add seasonings.

BAKED BEANS (no soaking required)

Yield: 2 pans 22" x 17" x 4". Size of serving: approx. 7 ozs.

Ingredients

Amount

Dried beans	14 pounds
Water to cover	
Salt pork or bacon	4 pounds
Salt	10 tablespoons
Mustard	2 tablespoons
Brown sugar	3 cups
Molasses	2 cups
Vinegar	4 tablespoons
Tomato catsup	2 cups
Tomato juice	2 quarts

Method:

1. Cook the beans until done.
2. Add salt pork or bacon.
3. Place in greased baking pans.
4. Combine salt, mustard and brown sugar. Add molasses, vinegar, catsup and tomato juice and pour over beans.
5. Bake for three hours. (This can also be completed by leaving in the stock pot).

CREAMED SALMON AND PEAS

Yield: 100 servings

Size of serving: 6 ounces

Ingredients

Amount

Canned salmon

20-15½ ounce cans

Cream Soup (condensed)

4-48 ounce cans

Canned peas

2-100 ounce cans

Liquid (from salmon and
peas)

3 quarts

Method:

1. Drain salmon and peas, reserving liquid.
2. Blend liquid with soup. Bring to boiling point. Add peas.
3. Remove black skin from salmon, crush bones, and break salmon into large chunks.
4. Just before serving add salmon.
5. Serve on bread, potatoes or rice.

FISH CHOWDER

Yield: 100 servings

Size of serving: 1 cup (8
ounces)

Ingredients

Amount

Fish fillets, fresh, frozen
or smoked

15 pounds

Onion, sliced

1½ quarts

Celery, diced

1½ quarts

Fat

2 cups

Potatoes, raw, diced

6 quarts

Carrots, raw, sliced

2 quarts

Water, boiling

6 quarts

Salt

3 tablespoons

Pepper

1 teaspoon

Milk, scalded

4 quarts

Method:

1. Cut fillets into bite-size pieces.
2. Sauté onion and celery in fat.
3. Add potatoes, carrots, water, salt and pepper.
4. Simmer until vegetables are tender.
5. Add fish and cook 10 minutes longer or until fish is cooked.
6. Add scalded milk.

QUEBEC SALMON PIE

Yield: 100 servings

Ingredients	Amount
Canned salmon	16 cans (15½ ounces each)
Mashed potatoes	12 quarts
Fat	4 cups
Onion, chopped	8 cups
Salt	4 tablespoons
Pepper	2 teaspoons

Method:

1. Flake salmon and crush bones.
2. To mashed potatoes, add 3 cups fat, onion, salt and pepper.
3. Place one half the potato mixture in the bottom of greased pans.
4. Cover with a layer of salmon.
5. Top with remaining potatoes; brush top with remaining fat.
6. Bake in moderate oven (400°F.) for 25-30 minutes until top is browned.

VEGETABLES**CABBAGE SALAD**

Yield: 100 servings

Size of serving: 4 ounces

Ingredients	Amount
Shredded cabbage	6 gallons (18 lbs.)
Vinegar	1 pint
Salt	⅓ cup
Pepper	2 teaspoons
Salad dressing	5½ pints

Method:

1. Shred cabbage finely and chill.
2. Add remaining ingredients just before serving.

SCALLOPED TOMATOES

Yield: 100 servings

Size of serving: 4 ounces

Ingredients

Amount

Canned tomatoes	10 quarts
Chopped onions	2 cups
Sugar	1 cup
Salt	5 tablespoons
Pepper	1½ teaspoons
Bread, cut in pieces	2 loaves

Method:

Combine all ingredients.

BREADS

BASIC BANNOCK RECIPE

Ingredients

Amount

Flour	1 pound
Baking powder	2 teaspoons
Salt	¼ teaspoon
Lard	1 tablespoon
Water, cold	1½ cups

Method:

1. Measure dry ingredients. Sift together.
2. Blend in lard.
3. Add cold water in well in centre of dry ingredients.
4. Mix until dry ingredients are just moistened.
5. Knead on lightly floured board. Pat into thin cake.
6. Bake at 400°F. for 40 minutes or until golden brown, or fry at medium heat 15 minutes or until golden brown.

DESSERTS

APPLESAUCE

Yield: 100 servings.

Size of serving: 6 ounces

Ingredients

Amount

Apples	50 pounds
Sugar	1 quart
Boiling water	3 quarts

Method:

1. Make a syrup of the sugar and water.
2. Wash the apples, cut in quarters and core, leaving the peeling on.
3. Drop the apples as prepared into the syrup.
4. Cover and cook quickly until tender.

BAKED APPLES

Method:

1. Select 100 medium-sized apples, suitable for baking.
2. Wash, core, score and place in baking dishes.
3. Make a heavy syrup of sugar and water and pour over apples.
4. Bake in a moderate oven until tender—35 to 45 minutes. Baste two or three times during cooking.
5. Lift into serving dishes. Pour the syrup over the fruit.

Note:

If oven space is not adequate or not available, apples may be cooked on top of the stove and turned over at half time during the cooking period to ensure even cooking.

FRUIT CRISP

Yield: 100 servings

Ingredients	Amount
Sweetened fruit (fresh or canned)	10 quarts
Flour	2 quarts
Baking soda (if available)	1 tablespoon
Baking powder (if available)	1 tablespoon
Salt	1- $\frac{2}{3}$ tablespoon
Brown sugar	2 quarts
Rolled oats	3 quarts
Shortening	1 quart

Method:

1. Sift flour, soda, baking powder and salt.
2. Add brown sugar and rolled oats. Mix well.
3. Cut in fat and mix to a crumb consistency.
4. Spread $\frac{2}{3}$ of crumb mixture in greased baking pans.
5. Spread fruit mixture on top.
6. Sprinkle remainder of crumb mixture on top. Pat down lightly.
7. Bake at 400° until golden brown and fruit is soft.

Note:

If canned fruit is used, thicken juice before making pudding, or drain fruit and use the diluted juice as a beverage.

GELATINE WITH FRUIT

Yield: 100 servings.

Size of serving: $2\frac{1}{2}$ inch square, $\frac{3}{4}$ to 1 inch thick

Ingredients	Amount
Flavoured gelatine powder	7 cups
Water and/or fruit juice	1 gallon
Fruit cocktail	2-100 ounce cans

Method:

1. Heat part of the liquid; add this to the gelatine powder and stir until dissolved. Add the remaining cold mixture.
2. Divide the gelatine mixture into pans.
3. Chill the mixture; when it begins to set, add the solid ingredients; chill.

CHOCOLATE PUDDING

Yield: 100 servings

Size of serving: 7 ounces

Ingredients	Amount
Hot milk	$3\frac{1}{2}$ gallons
Salt	3 tablespoons
Cocoa	$1\frac{1}{2}$ quarts
Cornstarch	$1\frac{1}{4}$ quarts
Cold milk	2 quarts
White sugar	$4\frac{1}{2}$ pints
Vanilla	3 tablespoons

Method:

1. Heat the milk.
2. Combine the salt, cocoa and cornstarch. Add the cold milk and mix to a thin paste.
3. Stir this gradually into the hot milk. Continue stirring until the pudding thickens. Cover.
4. Cook until there is no taste of raw starch. Stir occasionally.
5. Add the sugar and mix well.
6. Remove from the heat. Cool slightly, add the vanilla.

BREAD PUDDING

Yield: 100 servings

Size of serving: 2" x $3\frac{1}{2}$ " x 2"

Ingredients	Amount
Bread, sliced	$2\frac{1}{2}$ -24 ounce loaves
Butter	$1\frac{2}{3}$ cups
Raisins	2 quarts
Eggs	20
Sugar	1 quart
Salt	$3\frac{1}{3}$ tablespoons
Vanilla	4 tablespoons
Milk	2 gallons

Method:

1. Butter bread slices.
2. Place in pans.
3. Add raisins.
4. Whip eggs.
5. Add sugar, salt and vanilla.
6. Add milk. Mix well.
7. Pour over bread cubes and let stand 30 minutes.
8. Bake at 350°F. until firm and golden brown.
9. Serve hot with milk.

RICE PUDDING (without eggs)

Yield: 100 servings

Size of serving: 4 ounces

Ingredients

Amount

Raw rice	1½ quarts
Hot milk	3 gallons
Salt	5 teaspoons
Sugar	2½ pints
Nutmeg	¾ tablespoon
Butter	1 pint

Method:

1. Pick over the rice and wash it in warm water. **Drain.**
2. Add the rice to the hot milk and salt. Cook slowly in a steam-jacketed kettle or over hot water until the rice is almost tender.
3. Add the sugar, nutmeg and butter.
4. Continue cooking until the rice has absorbed most of the milk and is tender.
5. This pudding should be creamy and not stiff. It may be necessary to add more hot milk. When doing so, mix it in very gently—do not stir.

Variation

For rice raisin pudding add 2½ quarts of washed raisins (4 pounds) with the sugar.

HASTY PUDDING

Yield: 100 servings

Ingredients	Amount
Flour (unsifted)	3½ quarts
Baking powder	¾ cup
Salt	2 tablespoons
Brown sugar	12 cups
Raisins	3 quarts
Fluid milk	2 quarts
Brown sugar	3½ quarts
Boiling water	8 quarts
Fat	6 cups
Nutmeg	⅓ cup
Salt	5 teaspoons

Method:

1. Sift flour, baking powder and salt.
2. Add sugar (12 cups).
3. Add raisins to dry ingredients.
4. Add milk, stirring just enough to wet dry ingredients.
5. Pour into greased baking pan (1" thick).
6. Combine the last five ingredients and pour over the pudding.
7. Bake in hot oven (425°F.) for approximately 30 minutes.

BEVERAGES

TEA

Yield: 5 gallons

Ingredients

½ pound tea, 5½ gallons water.

Method:

1. Have water freshly boiling in a clean pot.
2. Put the tea in a thin cotton bag and tie the bag tightly at the top. (The dry tea should occupy only ⅓ of the bag in order to allow for expansion.) Place the bag in the water.
3. Remove from heat at once. Cover. Let stand in a warm place 5 to 7 minutes. Move the bag around in the water, lift out, drain thoroughly.
4. Keep the tea covered.
5. Serve immediately.

BOILED COFFEE

Yield: 5 gallons

Ingredients

2½ pounds coffee, 5½ gallons cold water, ½ teaspoon salt.

Method:

1. Heat water to boiling temperature.
2. Place coffee and salt in a moist unbleached cotton bag.
3. Tie securely, allowing ⅓ extra space for expansion.
4. Place bag in boiling water. Bring to boil again and remove from heat.
5. Allow to stand 10 to 15 minutes until coffee is of proper strength.
6. Remove coffee bag.

COCOA

Yield: 6 gallons

Ingredients

Amount

Cocoa	1½ quarts
Sugar	1½ pints
Salt	1 teaspoon
Water	3 gallons
Milk	3 gallons

Method:

1. Mix cocoa, sugar, salt and water.
2. Simmer for 5 minutes.
3. Add milk and reheat.

FOOD REQUISITION GUIDE
AMOUNTS TO SERVE 50 - 1000 PEOPLE

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE UNIT	AMOUNTS FOR SERVING						
				50	100	200	500	1000		
CANNED SOUP										
Soup (canned) diluted with milk or water	1 cup	10 oz. can	1 case—48 cans	20 cans	40 cans	80 cans	200 cans	400 cans		
		48 oz. can	1 case—12 cans	5 cans	9 cans	17 cans	42 cans	84 cans		
CANNED MEAT AND FISH										
Canned meat	2 oz.	12 oz. can	1 case—24 cans	9 cans	17 cans	34 cans	84 cans	167 cans		
		8 oz. can	1 case—48 cans	25 cans	50 cans	100 cans	250 cans	500 cans		
Canned fish (salmon)	½ cup	1 lb. can	1 case—24 cans	13 cans	25 cans	50 cans	125 cans	250 cans		
Canned fish (sardines)	½ can	3¼ oz. can	1 case—100 cans	25 cans	50 cans	100 cans	250 cans	500 cans		
CANNED VEGETABLES										
Canned pork and beans	1 cup	19 oz. can	1 case—24 cans	20 cans	40 cans	80 cans	200 cans	400 cans		
Canned peas, beans, corn, etc.	½ cup	19 oz. can	1 case—24 cans	10 cans	20 cans	40 cans	100 cans	200 cans		
		14 oz. can	1 case—24 cans	25 cans	50 cans	100 cans	250 cans	500 cans		
Canned spaghetti	1 cup	19 oz. can	1 case—24 cans	20 cans	40 cans	80 cans	200 cans	400 cans		
Canned tomatoes	½ cup	28 oz. can	1 case—24 cans	9 cans	18 cans	36 cans	90 cans	180 cans		
		100 oz. can	1 case—6 cans	3 cans	5 cans	10 cans	25 cans	50 cans		
Tomato juice, vegetable juice	½ cup	19 oz. can	1 case—24 cans	10 cans	20 cans	40 cans	100 cans	200 cans		
		100 oz. can	1 case—6 cans	3 cans	5 cans	10 cans	25 cans	50 cans		
		48 oz. can	1 case—12 cans	5 cans	10 cans	19 cans	46 cans	91 cans		

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE UNIT	AMOUNTS FOR SERVING				
				50	100	200	500	1000
FRUIT AND JUICES								
Fresh fruit—e.g. apples, oranges, bananas	1 each	pound	1 case—75 lbs. (number according to size of oranges) 2-4 bananas per lb. 3-4 apples per lb.	50	100	200	500	1,000
	½ cup	19 oz. can 100 oz. can	1 case—24 cans 1 case—6 cans	10 cans 3 cans	20 cans 5 cans	40 cans 10 cans	100 cans 25 cans	200 cans 50 cans
	6 each	pound	1 box—25 or 30 lbs.	6 lbs.	12½ lbs.	25 lbs.	63 lbs.	125 lbs.
Canned fruit								
Dried fruit (prunes or apricots)	½ cup	19 oz. can 48 oz. can	1 case—24 cans 1 case—12 cans	10 cans 5 cans	20 cans 10 cans	40 cans 19 cans	100 cans 46 cans	200 cans 91 cans
Canned fruit juice								
CEREALS								
Prepared packaged cereal	¾-1 cup (1 oz.)	8 oz. pkg. 12 oz. pkg.	1 case—24 or 48 pkgs. 1 case—32 or 36 pkgs.	3 pkgs. 4 pkgs.	6 pkgs. 8 pkgs.	12 pkgs. 16 pkgs.	30 pkgs. 40 pkgs.	60 pkgs. 80 pkgs.

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE UNIT	AMOUNTS FOR SERVING				
				50	100	200	500	1000
CEREALS (Continued)								
Milk (for cereal), fresh	½ cup	quart	gallon	5 qts.	10 qts.	20 qts.	50 qts.	100 qts.
or								
evaporated (diluted if water available)	½ cup diluted	1 lb. can	1 case—48 cans	7 cans	13 cans	25 cans	63 cans	125 cans
or								
dry skim	½ cup re-constituted	pound	1 or 5 lb. pkg. or 50 lb. drum	2 lbs.	3 lbs.	7 lbs.	16 lbs.	32 lbs.
Sugar (for cereal)	½ tbsp.	pound	1 case—10 5 lb. bags	1 lb.	1½ lbs.	3 lbs.	7 lbs.	14 lbs.
BREAD, ETC.								
Bread	2 slices	1½ lb. loaf		5 loaves	10 loaves	19 loaves	46 loaves	91 loaves
Crackers	8	1 lb. pkg. or 2 lb. pkg.		4 lbs.	8 lbs.	16 lbs.	40 lbs.	80 lbs.
Cookies (packaged)	4	1 lb. (30-40 cookies per lb.)		6 lbs.	12 lbs.	24 lbs.	60 lbs.	120 lbs.
SPREADS								
Butter or margarine	1 tbsp. (to spread 2 slices bread)	pound		1½ lbs.	3 lbs.	6 lbs.	14 lbs.	28 lbs.
Jam	2 tbsp	2 lb. or 4 lb. tin	30 lb. pail	4 lbs.	8 lbs.	16 lbs.	40 lbs.	80 lbs.
Cheese	1 oz.	pound	30 lb. cheese	3 lbs.	6 lbs.	12 lbs.	30 lbs.	60 lbs.
Peanut butter	2 tbsp	pound	25 lb. pail	3 lbs.	7 lbs.	13 lbs.	30 lbs.	60 lbs.

FOOD	SIZE OF		PURCHASE	UNIT	AMOUNTS FOR SERVING				
	SERVING				50	100	200	500	1000
BEVERAGES									
Milk—fresh (as a beverage) —dry skim	1 cup 1 cup re-constituted	quart pound	gallon 1 or 5 lb. pkg. or 50 lb. drum	10 qts. 3 lbs.	20 qts. 6½ lbs.	40 qts. 13 lbs.	100 qts. 31 lbs.	200 qts. 62 lbs.	
Coffee (regular)	6 fl. oz per cup	pound	1 case—12 1 lb. pkgs. 1 case—25 lbs. bulk	1¼ lbs.	2½ lbs.	5 lbs.	12½ lbs.	25 lbs.	
Coffee (instant)	6 fl. oz per cup	jar		4 oz.	8 oz.	16 oz.	40 oz.	80 oz.	
Tea	6 fl. oz per cup	pound	1 case —30 1 lb. pkgs. 1 case—100 lbs. bulk tea	¼ lb.	½ lb.	1 lb.	2½ lbs.	5 lbs.	
Cream (for beverage) or	1½ tbsp.	quart		1 qt.	2 qts.	4 qts.	10 qts.	20 qts.	
Evaporated milk (not diluted)	1½ tbsp.	1 lb. can	1 case—48 cans	3 cans	6 cans	12 cans	30 cans	60 cans	
Sugar (for beverage)	½ tbsp.	pound	1 case—10 1 lb. pkgs.	1 lb.	1½ lbs.	3 lbs.	7 lbs.	14 lbs.	

AMOUNTS TO SERVE 50-1,000 PEOPLE FOR SUGGESTED RECIPES

FOOD	SIZE OF SERVING	WHOLESALE		AMOUNTS FOR SERVING				
		PURCHASE UNIT	UNIT	50	100	200	500	1000
ROLLED OATS CEREAL	1 cup (8 oz.)	2 pound carton	50 lb. bag	1/2 cup (5 oz.)	1 cup (10 oz.)	2 cups (1 1/4 lbs.)	1 quart (3 lbs.)	2 qts. (6 lbs.)
Salt		3 lb. pkg.	20 lb. bag or 80 lb. bag	5 qts. (5 lbs.)	2 1/2 gals. (10 lbs.)	5 gals. (20 lbs.)	12 1/2 gals. (50 lbs.)	25 gals. (100 lbs.)
Rolled Oats								
CREAM OF WHEAT CEREAL	1 cup (8 oz.)	2 pound carton	50 lb. bag	5 tbsp. (3 oz.)	10 tbsp. (6 oz.)	1 1/4 cups (12 oz.)	3 cups (2 lbs.)	6 cups (4 lbs.)
Salt		1 lb., 12 oz. pkg.	10 lb. bag or 25 lb. bag	9 cups (3 1/2 lbs.)	3 1/2 qts. (6 1/2 lbs.)	7 qts. (13 lbs.)	4 1/2 gals. (32 1/2 lbs.)	9 gals. (65 lbs.)
Cream of Wheat								
BEAN SOUP WITH WIENERS	1 cup (8 oz.)	19 oz. can	1 case—24 cans	5 cans	10 cans	20 cans	50 cans	100 cans
Baked beans		bunch		1 bunch	2 bunches	4 bunches	10 bunches	20 bunches
Celery								
Onions		pound	10 or 50 lb. bag	1 1/4 lbs.	2 1/2 lbs.	5 lbs.	12 1/2 lbs.	25 lbs.
Tomatoes		28 oz. can	1 case—24 cans	3 cans	6 cans	12 cans	30 cans	60 cans
		100 oz. can	1 case—6 cans	1 can	2 cans	3 cans	8 cans	16 cans
Butter		pound		3/4 lb.	1 1/2 lbs.	3 lbs.	7 1/2 lbs.	15 lbs.

FOOD	SIZE OF PURCHASE		WHOLESALE		AMOUNTS FOR SERVING				
	SERVING	UNIT	UNIT	UNIT	50	100	200	500	1000
Flour		pound		98 lb. bag	6 oz.	12 oz.	1½ lbs.	3 qts. (4 lbs.)	6 qts. (8 lbs.)
Salt		2 pound carton		50 lb. bag	1 tsp.	2 tsp.	4 tsp.	3 tbsp.	6 tbsp.
Pepper		¼ oz. bottle or lb.			½ tsp.	1 tsp.	2 tsp.	5 tsp.	3 tbsp.
Wieners		pound			4 lbs.	8 lbs.	16 lbs.	40 lbs.	80 lbs.
RICE AND TOMATO SOUP									
Onions	1 cup (8 oz.)	pound		10 or 50 lb. bag	½ lb.	¾ lb.	1½ lbs.	4 lbs.	8 lbs.
Carrots		pound		50 lb. bag	½ lb.	¾ lb.	1½ lbs.	4 lbs.	8 lbs.
Celery		bunch			½ bunch	1 bunch	2 bunches	5 bunches	10 bunches
Rice		pound		25, 50 or 100 lb. bag	1 lb.	1¾ lbs.	3½ lbs.	9 lbs.	18 lbs.
Tomatoes		28 oz. can		1 case—24 cans	5 cans	10 cans	20 cans	50 cans	100 cans
		100 oz. can		1 case—6 cans	1 can	3 cans	5 cans	14 cans	28 cans
Salt		2 pound carton		50 lb. bag	2½ oz.	5 oz.	10 oz.	1½ lbs.	3 lbs.
Sugar		pound		98 lb. bag	1½ oz.	3 oz.	6 oz.	1 lb.	2 lbs.

FOOD	SIZE OF SERVING	PURCHASE		WHOLESALE		AMOUNTS FOR SERVING				
		UNIT	UNIT	UNIT	UNIT	50	100	200	500	1000
VEGETABLE SOUP WITHOUT STOCK										
	1 cup (8 oz.)									
Carrots		pound		50 lb. bag		2 lbs.	4½ lbs.	9 lbs.	23 lbs.	45 lbs.
Potatoes		pound		75 lb. bag		2 lbs.	4½ lbs.	9 lbs.	23 lbs.	45 lbs.
Tomatoes		28 oz. can		1 case—24 cans		5 cans	9 cans	18 cans	45 cans	90 cans
		100 oz. can		1 case—6 cans		1 can	2 cans	5 cans	12 cans	24 cans
Onions		pound		10 or 50 lb. bag		2 lbs.	4½ lbs.	9 lbs.	23 lbs.	45 lbs.
Fat		pound		30 lb. case		1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Cabbage		head		50 lb. bag		1 large head	2 large heads	4 heads	10 heads	20 heads
Peas		19 oz. can		1 case—24 cans		2 cans	4 cans	8 cans	20 cans	40 cans
		100 oz. can		1 case—6 cans		½ can	1 can	2 cans	4 cans	8 cans
Salt		2 pound carton		50 lb. bag		¾ oz.	1½ oz.	3 oz.	8 oz.	1 lb.
QUICK VEGETABLE SOUP										
	1 cup (8 oz.)									
Canned corn		19 oz. can		1 case—24 cans		8 cans	16 cans	32 cans	80 cans	160 cans
Canned peas		19 oz. can		1 case—24 cans		4 cans	8 cans	16 cans	40 cans	80 cans
		100 oz. can		1 case—6 cans		½ can	1½ cans	3 cans	8 cans	16 cans
Tomatoes		28 oz. can		1 case—24 cans		6 cans	12 cans	24 cans	60 cans	120 cans
		100 oz. can		1 case—6 cans		1½ cans	3 cans	6 cans	15 cans	30 cans

FOOD	SIZE OF PURCHASE		AMOUNTS FOR SERVING					
	SERVING	UNIT	WHOLESALE UNIT	50	100	200	500	1000
Salt		2 pound carton	50 lb. bag	2½ tbsp	5 tbsp. (3 oz.)	10 tbsp. (6 oz.)	1½ cups (1 lb.)	3 cups (2 lbs.)
Pepper		pound		2 tsp.	4 tsp.	8 tsp.	7 tbsp.	13 tbsp.
Butter or margarine		pound		¾ cup	1 cup (½ lb.)	2 cups (1 lb.)	5 cups (2½ lbs.)	10 cups (5 lbs.)
Onions		pound	10 or 50 lb. bag	2 cups (10 oz.)	4 cups (1¼ lbs.)	8 cups (2½ lbs.)	4 qts. (6 lbs.)	8 qts. (12 lbs.)
Bread		1½ lb. loaf		approx. ¾ loaf	app'x 1½ loaves	approx. 3 loaves	7 loaves	app'x. 13 loaves
MEAT AND VEGETABLE STEW								
Lean boneless beef		pound		12½ lbs.	25 lbs.	50 lbs.	125 lbs.	250 lbs.
Onions		pound	10 or 50 lb. bag	3 lbs.	6 lbs.	12 lbs.	30 lbs.	60 lbs.
Flour		pound	98 lb. bag	¾ qt. (1 lb.)	1½ qts. (2 lbs.)	3 qts. (4 lbs.)	7½ qts. (10 lbs.)	15 qts. (20 lbs.)
Vegetables		pound		5 lbs.	10 lbs.	20 lbs.	50 lbs.	100 lbs.
Salt		2 pound carton	50 lb. bag	2 oz.	4 oz.	8 oz.	1¼ lbs.	2½ lbs.
Pepper		1¼ oz. bottle or pound		1 tsp.	2 tsp.	4 tsp.	3½ tbsp.	6¾ tbsp.

FOOD	SIZE OF SERVING	PURCHASE		AMOUNTS FOR SERVING				
		UNIT	WHOLESALE UNIT	50	100	200	500	1000
MACARONI WITH 13 oz. TOMATOES AND MEAT								
Minced Meat		pound	10 or 50 lb. bag	12 lbs.	25 lbs.	50 lbs.	125 lbs.	250 lbs.
Onions		pound	1 case—10 or 20 lbs.	1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Macaroni		pound		4 lbs.	7½ lbs.	15 lbs.	38 lbs.	76 lbs.
Flour		pound	98 lb. bag	1 pt. (¾ lb.)	1 qt. (1½ lbs.)	2 qts. (3 lbs.)	5 qts. (7½ lbs.)	10 qts. (15 lbs.)
Salt		2 pound carton	50 lb. bag	1½ oz.	3 oz.	6 oz.	1 lb.	2 lbs.
Pepper		1¼ oz. bottle or pound		1 tbsp.	2 tbsp.	4 tbsp.	10 tbsp.	1¼ cups
Tomatoes		28 oz. can	1 case—24 cans	8 cans	15 cans	30 cans	75 cans	150 cans
		100 oz. can	1 case—6 cans	2 cans	4 cans	8 cans	20 cans	40 cans
MACARONI AND 7 to 8 oz. CHEESE								
Macaroni		pound	1 case—10 or 20 lbs.	3 lbs.	6 lbs.	12½ lbs.	30 lbs.	60 lbs.
Fat		pound	30 lb. case	½ lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
Flour		pound	98 lb. bag	¾ lb.	1½ lbs.	3 lbs.	7½ lbs.	15 lbs.
Milk		quart	gallon	3 qts.	6 qts.	12 qts. (3 gals.)	30 qts. (7½ gals.)	60 qts. (15 gals.)

FOOD	SIZE OF PURCHASE		WHOLESALE UNIT	AMOUNTS FOR SERVING				
	SERVING	UNIT		50	100	200	500	1000
Salt		2 pound carton	50 lb. bag	1½ oz.	3 oz.	6 oz.	1 lb.	2 lbs.
Pepper		1¼ oz. bottle or pound		½ tsp.	1 tsp.	2 tsp.	5 tsp.	3 tbsp
Mustard		½ pound tin		½ tbsp.	1 tbsp.	2 tbsp.	5 tbsp.	10 tbsp.
Cheese, grated		pound	30 lb. cheese	2 lbs.	4½ lbs.	9 lbs.	22½ lbs.	45 lbs.
SPANISH RICE	7 oz.							
Rice		pound	25, 50 or 100 lb. bag	3 lbs.	6 lbs.	12 lbs.	30 lbs.	60 lbs.
Fat		pound	30 lb. case	½ lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
Onions		pound	10 or 50 lb. bag	1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Tomatoes		28 oz. can	1 case—24 cans	6 cans	12 cans	24 cans	60 cans	120 cans
		100 oz. can	1 case—6 cans	1 can	3 cans	6 cans	15 cans	30 cans
Salt		2 pound carton	50 lb. bag	2 oz.	4 oz.	8 oz.	1¼ lbs.	2½ lbs.
Pepper		1¼ oz. bottle or pound		1 tbsp.	2 tbsp.	4 tbsp.	10 tbsp.	1¼ cups
Grated cheese		pound	30 lb. cheese	3 lbs.	6 lbs.	12 lbs.	30 lbs.	60 lbs.
CORNED BEEF HASH	1 cup (8 oz.)							
Onions		pound	10 or 50 lb. bag	1½ lbs.	3 lbs.	6 lbs.	15 lbs.	30 lbs.
Fat		pound	30 lb. case	½ lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE UNIT	AMOUNTS FOR SERVING				
				50	100	200	500	1000
Potatoes		pound	75 lb. bag	20 lbs. A.P.	40 lbs. A.P.	80 lbs. A.P.	200 lbs. A.P.	400 lbs. A.P.
Corned beef		12 oz. can	1 case—24 cans	12 cans	24 cans	48 cans	120 cans	240 cans
Salt		2 pound carton	50 lb. bag	½ oz.	1 oz.	2 oz.	5 oz.	10 oz.
MEAT AND VEGETABLE 8 oz.								
STEW								
(Canned ingredients)								
Canned meat		6 lb. can	6 lb. can	1½ cans	3 cans	6 cans	15 cans	30 cans
Potatoes		pound	75 lb. bag	5 lbs.	10 lbs.	20 lbs.	50 lbs.	100 lbs.
Onions		pound	10 or 50 lb. bag	3 lbs.	6 lbs.	10 lbs.	25 lbs.	50 lbs.
Tomatoes		100 oz. can	1 case—6 cans	2 cans	5 cans	10 cans	24 cans	48 cans
Canned beans, peas, carrots, corn		19 oz. can	1 case—24 cans	5 cans	10 cans	20 cans	50 cans	100 cans
Flour		pound	98 lb. bag	½ lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
SHEPHERD'S PIE 1 cup (8 oz.)								
Fat		pound	30 lb. case	¼ lb.	½ lb.	1 lb.	2½ lbs.	5 lbs.
Onions		pound	10 or 50 lb. bag	¾ lb.	1½ lbs.	3 lbs.	7½ lbs.	15 lbs.
Minced meat		pound		12 lbs.	25 lbs.	50 lbs.	125 lbs.	250 lbs.
Salt		2 pound carton	50 lb. bag	1½ tbsp	1½ oz.	3 oz.	7½ oz.	1 lb.

FOOD	SIZE OF PURCHASE		WHOLESALE		AMOUNTS FOR SERVING				
	SERVING	UNIT	UNIT	UNIT	50	100	200	500	1000
Pepper		1¼ oz. bottle pound			1 tsp.	1 tsp.	2 tsp.	5 tsp.	3 tbsp.
Potatoes		pound	75 lb. bag		18 lbs. A.P.	35 lbs. A.P.	70 lbs. A.P.	175 lbs. A.P.	350 lbs. A.P.
MEAT LOAF	4 oz.								
Rolled Oats		pound	20 lb. or 80 lb. bag		1¼ lbs.	2½ lbs.	5 lbs.	12½ lbs.	25 lbs.
Eggs		dozen	1 case—30 dozen		9 eggs	18 eggs	36 eggs	90 eggs	180 eggs
Milk		quart	gallon		3 cups	6½ cups	2 qts. & 6½ qts.	6½ qts.	13 qts.
Onions		pound	10 or 50 lb. bag		1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Minced lean beef		pound			9 lbs.	17 lbs.	34 lbs.	85 lbs.	170 lbs.
Salt		2 pound carton	50 lb. bag		1½ oz.	3 oz.	6 oz.	1 lb.	2 lbs.
Pepper		1¼ oz. bottle or pound			2½ tsp.	5 tsp.	3½ tbsp.	8 tbsp.	1 cup
CHILE CON CARNE	8 oz.								
Hamburger		pound			10 lbs.	20 lbs.	40 lbs.	100 lbs.	200 lbs.
Onions		pound	10 or 50 lb. bag		3 lbs.	6 lbs.	12 lbs.	30 lbs.	60 lbs.
Tomatoes		100 oz. can	1 case—6 cans		1½ cans	3 cans	6 cans	15 cans	30 cans
Canned Red Kidney Beans		19 oz. can	1 case—24 cans		10 cans	20 cans	40 cans	100 cans	200 cans

FOOD	SIZE OF SERVING	WHOLESALE		AMOUNTS FOR SERVING				
		PURCHASE UNIT	UNIT	50	100	200	500	1000
Chile Powder		1 1/4 oz. bottle or pound		1/2 cup	1 cup	2 cups	5 cups	10 cups
BAKED BEANS	7 oz.							
Dried beans		pound	120 lb. bag	7 lbs.	14 lbs.	28 lbs.	70 lbs.	140 lbs.
Salt pork or bacon		pound		2 lbs.	4 lbs.	8 lbs.	20 lbs.	40 lbs.
Salt		2 pound carton	50 lb. bag	2 1/2 oz.	5 oz.	10 oz.	25 oz.	50 oz.
Mustard		1/2 pound tin		1 tbsp.	1/3 oz.	2/3 oz.	(1 1/2 lbs.)	(3 lbs.)
Brown sugar		pound		1/2 lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
Molasses		quart or 2 lb. can		1 cup	2 cups	4 cups	2 qts.	4 qts.
Vinegar		quart	gallon	2 tbsp.	4 tbsp.	1/2 cup	1 1/4 cups	1 pint
Tomato catsup		13 fl. oz. bottle		1 cup	2 cups	2 bottles	5 bottles	10 bottles
Tomato juice		19 oz. can	1 case—24 cans	2 cans	4 cans	8 cans	20 cans	40 cans
		100 oz. can	1 case—6 cans	1/2 can	1 can	1 1/2 cans	4 cans	8 cans
CREAMED SALMON	6 oz.							
AND PEAS								
Canned salmon		15 1/2 oz. tin	1 case—24 cans	10 cans	20 cans	40 cans	100 cans	200 cans
Cream soup, condensed		10 oz. can	1 case—48 cans	10 cans	20 cans	40 cans	100 cans	200 cans
		48 oz. can	1 case—12 cans	2 cans	4 cans	8 cans	20 cans	40 cans

FOOD	SIZE OF PURCHASE		WHOLESALE		AMOUNTS FOR SERVING				
	SERVING	UNIT	UNIT	UNIT	50	100	200	500	1000
Canned peas		19 oz. can	1 case—24 cans		5 cans	10 cans	20 cans	50 cans	100 cans
		100 oz. can	1 case—6 cans		1 can	2 cans	4 cans	10 cans	20 cans
FISH CHOWDER	8 oz.								
Fish filets		pound			7 lbs.	15 lbs.	30 lbs.	75 lbs.	150 lbs.
Onions		pound			1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Celery		bunch	10 or 50 lb. bag		1 bunch	2 bunches	4 bunches	10 bunches	20 bunches
Fat		pound	30 lb. case		½ lb.	1 lb.	2 lbs.	10 lbs.	20 lbs.
Potatoes		pound	75 lb. bag		4½ lbs.	9 lbs.	18 lbs.	45 lbs.	90 lbs.
Carrots		pound	50 lb. bag		1½ lbs.	3 lbs.	6 lbs.	15 lbs.	30 lbs.
Salt		2 lb. carton	50 lb. bag		1½ tbsp.	3 tbsp.	6 tbsp.	1 cup	2 cups
Pepper		1¼ oz. bottle			½ tsp.	1 tsp.	2 tsp.	10 tsp.	20 tsp.
Milk		or pound quart	gallon		2 qts.	4 qts.	8 qts.	5 gals.	10 gals.
QUEBEC SALMON PIE									
Canned salmon		15½ oz. tin	1 case—24 cans		8 cans	16 cans	32 cans	80 cans	160 cans
Potatoes		pound	75 lb. bag		15 lbs.	35 lbs.	70 lbs.	175 lbs.	350 lbs.
Onions		pound	10 or 50 lb. bag		1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Fat		pound	30 lb. case		1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Salt		2 pound carton	50 lb. bag		2 tbsp.	4 tbsp.	½ cup	1¼ cups	2½ cups

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE UNIT	AMOUNTS FOR SERVING				
				50	100	200	500	1000
Pepper		1 1/4 oz. bottle or pound		1 tsp.	2 tsp.	4 tsp.	10 tsp.	20 tsp.
CABBAGE SALAD	4 oz.							
Cabbage		head	50 lb. bag	3 heads	6 heads (approx. 18 lbs.)	12 heads	30 heads	60 heads
Vinegar		pt. or qt.	gallon	1/2 pt.	1 pt.	1 qt.	2 1/2 qts.	5 qts.
Salt		2 lb. carton	50 lb. bag	3 tbsp.	2 1/2 oz.	5 oz.	12 1/2 oz.	1 1/2 lbs.
Pepper		1 1/4 oz. bottle or pound		1 tsp.	2 tsp.	4 tsp.	3 tbsp.	6 tbsp.
Salad dressing				7 cups	5 1/2 pts.	5 1/2 qts.	14 qts.	28 qts.
SCALLOPED TOMATOES	4 oz.							
Tomatoes		28 oz. can	1 case—24 cans	7 cans	15 cans	30 cans	75 cans	150 cans
		100 oz. can	1 case—6 cans	2 cans	4 cans	8 cans	20 cans	40 cans
Chopped onions		pound	10 or 50 lb. bag	1/2 lb.	3/4 lb.	1 1/2 lbs.	4 lbs.	8 lbs.
Sugar		pound	98 lb. bag	1/2 lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
Salt		2 pound carton	50 lb. bag	1 1/4 oz.	2 1/2 oz.	5 oz.	3/4 lb.	1 1/2 lbs.
Pepper		1 1/4 oz. bottle or pound		3/4 tsp.	1 1/2 tsp.	3 tsp.	2 1/2 tbsp.	5 tbsp.
Bread		1 1/2 lb. loaf		1 loaf	2 loaves	4 loaves	10 loaves	20 loaves

FOOD	SIZE OF PURCHASE		WHOLESALE UNIT	AMOUNTS FOR SERVING				
	SERVING	UNIT		50	100	200	500	1000
APPLESAUCE	6 oz.							
Apples		pound	1 box—40 lbs.	25 lbs.	50 lbs.	100 lbs.	250 lbs.	500 lbs.
Sugar		pound	98 lb. bag	1 lb.	2¼ lbs.	4½ lbs.	11 lbs.	22 lbs.
BAKED APPLES	1 apple							
Apples		pound	1 box—40 lbs.	18 lbs.	35 lbs.	70 lbs.	175 lbs.	350 lbs.
Sugar		pound	98 lb. bag	1½ lbs.	3 lbs.	6 lbs.	15 lbs.	30 lbs.
FRUIT CRISP								
Sweetened fruit				5 qts.	10 qts.	20 qts.	50 qts.	100 qts.
Flour		pound	98 lb. bag	1½ lbs.	3 lbs.	6 lbs.	15 lbs.	30 lbs.
Baking soda		pound		½ tbsp.	1 tbsp.	2 tbsp.	5 tbsp.	10 tbsp.
Baking powder		pound	5 lb. tin	½ tbsp.	1 tbsp.	2 tbsp.	5 tbsp.	10 tbsp.
Salt		2 pound carton	50 lb. bag	1 tbsp.	1½ tbsp.	3 tbsp.	5 oz.	10 oz.
Brown sugar		pound		1¾ lbs.	3½ lbs.	7 lbs.	17½ lbs.	35 lbs.
Rolled Oats		3 lb. pkg.	20 lb. or 80 lb. bag	1½ lbs.	3 lbs.	6 lbs.	15 lbs.	30 lbs.
Shortening		pound	30 lb. case	1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
GELATINE WITH FRUIT	2½" square							
Flavoured gelatine powder		¾ oz. pkg.	1 case—36 ¾ oz. pkgs.	6 pkgs.	12 pkgs.	24 pkgs.	60 pkgs.	120 pkgs.

FOOD	SIZE OF SERVING		WHOLESALE UNIT		AMOUNTS FOR SERVING				
			PURCHASE UNIT	UNIT	50	100	200	500	1000
Fruit cocktail			19 oz. can 100 oz. can	1 case—24 cans 1 case—6 cans	5 cans 1 can	10 cans 2 cans	20 cans 4 cans	50 cans 10 cans	100 cans 20 cans
CHOCOLATE PUDDING	7 oz.								
Milk			quart	gallon	8 qts.	16 qts.	32 qts.	80 qts.	160 qts.
Salt			2 pound carton	50 lb. bag	1½ tbsp.	1½ oz.	3 oz.	7½ oz.	1 lb.
Cornstarch			1 pound package	1 case—40 1 lb. pkgs.	1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.
Cocoa			pound		¾ lb.	1½ lbs.	3 lbs.	7½ lbs.	15 lbs.
Sugar			pound	98 lb. bag	2¼ lbs.	4½ lbs.	9 lbs.	22½ lbs.	45 lbs.
Vanilla			16 fl. oz. bottle		1½ tbsp.	3 tbsp.	6 tbsp.	1 cup (7½ oz.)	2 cups (15 oz.)
BREAD PUDDING	piece 2" x 3½" x 2"								
Bread			1½ lb. loaf		1¼ loaves	2½ loaves	5 loaves	12½ loaves	25 loaves
Butter			pound		½ lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
Raisins			pound	30 lb. box	1½ lbs.	3¼ lbs.	6½ lbs.	16 lbs.	32 lbs.
Eggs			dozen	1 case—30 doz.	10 eggs	20 eggs	40 eggs	100 eggs	200 eggs
Sugar			pound	98 lb. bag	1 lb.	2 lbs.	4 lbs.	10 lbs.	20 lbs.

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE UNIT	AMOUNTS FOR SERVING				
				50	100	200	500	1000
Salt		2 pound carton	50 lb. bag	1 2/3 tbsp. (1 oz.)	3 tbsp. (1 2/3 oz.)	6 tbsp. (3 1/3 oz.)	10 oz.	1 1/4 lbs.
Vanilla		16 fl. oz. bottle		2 tbsp. (1 oz.)	4 tbsp. (2 oz.)	1/2 cup (4 oz.)	1 1/4 cups (10 oz.)	2 1/2 cups (20 oz.)
Milk		quart	gallon	1 gal.	2 gals.	4 gals.	10 gals.	20 gals.
RICE PUDDING								
Rice	4 oz.	pound	25, 50 or 100 lb. bag	2 lbs.	4 lbs.	7 1/2 lbs.	18 lbs.	37 lbs.
Milk		quart	gallon	1 1/2 gals.	3 gals.	6 gals.	15 gals.	30 gals.
Salt		2 pound carton	50 lb. bag	2 1/2 tsp. (1/2 oz.)	5 tsp.. (1 oz.)	3 tbsp. (1 2/3 oz.)	5 oz.	10 oz.
Sugar		pound	98 lb. bag	1 1/4 lbs.	2 1/2 lbs.	5 lbs.	12 1/2 lbs.	25 lbs.
Nutmeg		pound or 1 1/4 oz. bottle		1 tsp.	3/4 tbsp.	1 1/2 tbsp.	3 3/4 tbsp.	7 1/2 tbsp.
Butter		pound		1/2 lb.	1 lb.	2 lbs.	5 lbs.	10 lbs.
HASTY PUDDING								
Flour		pound	98 lb. bag	2 lbs.	4 lbs.	8 lbs.	20 lbs.	40 lbs.
Baking powder		pound	5 lb. tin	6 tbsp.	3/4 cup	1 1/2 cups	4 cups	8 cups
Salt		2 lb. carton	50 lb. bag	2 tbsp.	4 tbsp.	1/2 cup	1 1/4 cups	2 1/2 cups
Brown sugar		pound		3 lbs.	6 lbs.	12 lbs.	30 lbs.	60 lbs.

FOOD	SIZE OF SERVING	PURCHASE UNIT	WHOLESALE	AMOUNTS FOR SERVING				
				50	100	200	500	1000
Raisins		pound	30 lb. box	2½ lbs.	5 lbs.	10 lbs.	25 lbs.	50 lbs.
Milk		quart	gallon	1 quart	2 qts.	1 gal.	2½ gals.	5 gals.
Fat		pound	30 lb. case	1½ lbs.	3 lbs.	6 lbs.	15 lbs.	30 lbs.
Nutmeg		¼ oz. bottle or pound		2⅔ tbsp	⅓ cup	⅔ cup	1⅔ cups	3 cups
COCOA BEVERAGE	1 cup (8 oz.)							
Cocoa		pound		¾ lb.	1½ lbs.	3 lbs.	7½ lbs.	15 lbs.
Sugar		pound	98 lb. bag	¾ lb.	1½ lbs.	3 lbs.	7½ lbs.	15 lbs.
Salt		2 pound carton	50 lb. bag	½ tsp.	1 tsp.	2 tsp.	5 tsp.	3 tbsp
Milk		quart	gallon	1½ gals.	3 gals.	6 gals.	15 gals.	30 gals.

FOODS WITH GOOD STORAGE LIFE

(For Family or Institutional Emergency Stocks)

Emergency food stocks should be kept in a cool, dry place and inspected regularly for keeping qualities. Packaged items should be stored in clean, covered metal containers to protect against insects and rodents. To maintain food stocks in good condition, they should be rotated regularly by using them in regular meals and replacing with new stock.

The following list of canned and packaged foods which require little or no preparation or cooking, have good storage properties and will provide a guide for selection.

PROCESSED MILK

Skim milk powder

Evaporated milk (turn cans end to end every three months to prevent curdling)

Instant dehydrated creaming agents

JUICES, FRUITS, VEGETABLES

Fruit juices (juices with high acid content may not keep as long)

Canned applesauce, apricots, peaches, pears

Canned green or wax beans, corn, peas, potatoes

Instant potatoes

CEREALS, BISCUITS

Pre-cooked cereals (infant types), ready-to-eat cereals

Canned breads, canned cakes

Packaged biscuits, crackers, melba toast

Instant rice, macaroni, spaghetti

MAIN DISH ITEMS

Canned meats, fish, baked beans, stews, ready-to-serve meals

Canned soups, dehydrated soups

OTHER FOODS

Honey, jam, jelly, marmalade, peanut butter, syrups

Sugar, hard candy

BEVERAGES

Instant coffee, tea, instant chocolate powders, fruit beverage powders, bouillon cubes.

NOTE:

For details regarding amounts of water and food for household emergency supplies, see "Your Emergency Pack" pamphlet, produced by Emergency Welfare Services Division, Department of National Health and Welfare.

CHECK LIST—ORGANIZATION OF EMERGENCY FEEDING

Check off these items. They will provide a ready illustration of the state of operational capability of your EF Service:

Check "X"

1. EF Chief appointed.
2. Chief trained.
3. EF Planning Committee selected.
4. EF Surveys completed.
5. EF Supervisors appointed.
6. EF Supervisors trained.
7. EF area in Welfare Centres selected.
8. EF installations selected within Welfare Centre Areas.
9. Arrangements agreed upon with existing restaurants, churches, hotels.
10. Supporting EWS and municipal emergency services arranged.
11. Floor plans, equipment, supplies and staff for EF area in each Welfare Centre established.
12. EF plan written.
13. Deputy Chief and Deputy Supervisors appointed and trained.
14. Training program for workers organized.
15. Exercises held.
16. Personnel of Mobile EF Teams designated.

**EMERGENCY WELFARE SERVICES
GLOSSARY OF TERMS**

- | | |
|--|---|
| 1. AUXILIARY KITCHEN | A place in which food would be prepared and cooked, to be served in another location. |
| 2. CASE INDEX CARD —
Personal Services | A two part card, with a one-time carbon, which would be filled out for each individual or family applying for assistance at the Counselling and Emergency Aid Bureau, Personal Services. |
| 3. CASE INDEX KIT | A carton containing 500 Case Index Cards, 24 blank Index Marker Cards and the instructions for their use in the operation of the Counselling and Emergency Aid Bureau of Personal Services. |
| 4. CENTRAL INDEX | The place in a Zone to which the duplicate of the Case Index Card is sent for filing and checking to prevent the duplication of counselling and emergency aid in another Welfare Centre or reception community. |
| 5. CENTRAL REGISTRY | The Centre(s) serving a specific target area(s) to which a Local Registry forwards the original copies of Registration Cards and unanswered Inquiries for filing and searching. |
| 6. CENTRAL REGISTRY
MANAGER | The person appointed by the Zone Chief of Registration & Inquiry who is responsible for the planning, organization and operation of the Central Registry. |
| 7. CHIEF — EMERGENCY
CLOTHING
(provincial, zone, municipal) | A qualified person appointed by the Emergency Welfare Services Director, who is responsible for the detailed planning, organization and operation of the Emergency Clothing Service at each level. |

- | | |
|--|--|
| 8. CHIEF — EMERGENCY FEEDING
(provincial, zone, municipal) | A qualified person appointed by the Emergency Welfare Services Director, who is responsible for the detailed planning, organization and operation of the Emergency Feeding Service at each level. |
| 9. CHIEF — EMERGENCY LODGING
(provincial, zone, municipal) | A qualified person appointed by the Emergency Welfare Services Director, who is responsible for the detailed planning, organization and operation of the Emergency Lodging Service at each level. |
| 10. CHIEF — PERSONAL SERVICES
(provincial, zone, municipal) | A qualified person appointed by the Emergency Welfare Services Director, who is responsible for the detailed planning, organization and operation of Personal Services at each level. |
| 11. CHIEF — REGISTRATION AND INQUIRY
(provincial, zone, municipal) | A qualified person appointed by the Emergency Welfare Services Director, who is responsible for the detailed planning, organization and operation of the Registration and Inquiry Service at each level. |
| 12. CLOTHING DEPOT | The site within a reception community where used and new clothing will be assembled, sorted, sized, bundled and forwarded to Welfare Centres for distribution. |
| 13. CLOTHING ISSUE VOUCHER | A three-part form with one-time carbon, used to record the type and quantity of clothing issued to an evacuee. |
| 14. CONGREGATE FACILITY | A building other than a private dwelling used for congregate lodging. |
| 15. CONGREGATE FACILITY MANAGER | The person appointed by the Municipal Chief of Emergency Lodging, who is responsible for the administration of a Congregate Facility. |
| 16. CONGREGATE LODGING | The lodging of a large number of evacuees, usually a special group, in a congregate facility. |

**17. COUNSELLING AND
EMERGENCY AID BUREAU**

One of the four bureaux of Personal Services. The function of this bureau is to provide counselling services and financial and/or material assistance for those individuals and families who need help with their personal questions and problems regarding their rehabilitation and/or emotional readjustment.

**18. DIRECTOR — EMERGENCY
WELFARE SERVICES
(provincial, zone, municipal)**

The person appointed to organize, co-ordinate, and operate the five Emergency Welfare Services at each level (from the Department of Public Welfare where such exists).

19. DWELLING

Self contained living quarters with a private entrance (either from outside the building or via a common hall or lobby).

**20. EMERGENCY
ACCOMMODATION**

Emergency living space in buildings for persons who have evacuated a damaged or potentially dangerous area or whose homes have been destroyed.

**21. EMERGENCY ASSIGNMENT
RATIO**

The number of persons to be lodged per room in a reception community in order to provide emergency accommodation for the residents of the community and the probable number of evacuees assigned to it.

**22. EMERGENCY CHANGE OF
ADDRESS CARD**

Post Office Form E-1, to be used by evacuees in a war emergency as a postal locator card for undeliverable letter mail addressed to disaster areas.

**23. EMERGENCY CLOTHING
SERVICE**

One of the five Emergency Welfare Services. This Service is responsible in an emergency for supplying clothing to those requiring it.

**24. EMERGENCY FEEDING
SERVICE**

One of the five Emergency Welfare Services. This Service is responsible in an emergency for the feeding of persons without food or means of preparing it.

25. EMERGENCY FOOD PACK

At least a seven day (and preferably a fourteen day) supply of emergency type food and liquid, packed in readiness as a self-help measure for evacuation or shelter living.

26. EMERGENCY LODGING SERVICE

One of the five Emergency Welfare Services. This Service is responsible in an emergency for the provision of immediate, temporary accommodation to people requiring it.

27. EMERGENCY WELFARE SERVICES

The five Services responsible for providing in an emergency, those emergency welfare services which would be essential for the survival and well being of persons affected by the disaster (Emergency Clothing, Emergency Feeding, Emergency Lodging, Registration and Inquiry, Personal Services).

28. EVACUEE

A citizen or resident of Canada who, because of an emergency, leaves his home and goes to another place in Canada.

29. FAMILY MEETING PLACE

A place where members of a family have planned to reunite eventually should they be separated by disaster.

30. FEEDING ESTABLISHMENT

A place, commercial or non-commercial, where food is prepared and served (e.g. restaurant, school, club).

31. FEEDING STATION

A site where food which has been prepared in another location, would be served.

**32. HEADQUARTERS —
EMERGENCY WELFARE
SERVICES
(provincial, zone, municipal)**

The physical location (within an Emergency Government Headquarters at each level) from which the Emergency Welfare Services Director and Chiefs of Services would direct emergency operations.

33. IMPROVISED FEEDING

The preparation, cooking and serving of food in time of emergency by means of facilities other than those in private dwellings, commercial and non-commercial feeding establishments.

34. INQUIRY CARD

A card which would be filled out by a person inquiring about the safety and whereabouts of another person.

35. INQUIRY KIT

A carton containing 750 Inquiry Cards and the equipment required for the making of inquiries by evacuees.

36. INSTITUTIONAL CARE BUREAU

One of the four bureaux of Personal Services. The function of this bureau is to plan for the evacuation from probable target areas, or the reception and care in reception areas, of people who are confined to welfare institutions.

37. LOCAL REGISTRY

The place in a reception community to which all completed Registration and Inquiry Cards are sent for processing.

38. LOCAL REGISTRY MANAGER

The person appointed by the municipal Chief of Registration and Inquiry, who is responsible for the planning, organizing and operation of the Local Registry.

39. LODGING ASSIGNMENT CARD

A three part card with a one-time carbon, which would be used in the assignment of evacuees to either a private dwelling or a congregate facility.

40. LODGING ASSIGNMENT OFFICER

The person who is responsible for selecting the emergency accommodation to which evacuees are sent.

41. LODGING FACILITY CARD — COMMERCIAL AND CONGREGATE

A card used to record detailed information about congregate facilities.

42. LODGING FACILITY CARD — DWELLINGS

A card used to record information about a private dwelling.

43. LODGING LEADER

A person appointed by the Supervisor of Emergency Lodging, who is responsible for the group instruction of evacuees in the completion of Lodging Assignment Cards.

44. MASS FEEDING

The feeding of large groups of people in an emergency, in contrast to feeding in private dwellings.

45. MATCHING

That part of the process of assigning evacuees to temporary accommodation, based on one or more factors which would contribute to the compatibility of householder and evacuee.

46. MOBILE EWS TEAM

A team of EWS workers whose function is to assist evacuees during re-entry operations and/or within areas where EWS are over-burdened or unorganized.

47. OPEN STOCK — STOCK RETURN FORM

A two part form with a one-time carbon, used to record the total number of unpacked clothing items of all categories held in Clothing Depots and Welfare Centres.

48. PERSONAL SERVICES

One of the five Emergency Welfare Services. This Service is responsible in an emergency for providing individuals and families with special care, guidance and material assistance through 4 Bureaux: Reception, Unattached Children and Dependent Adults, Institutional Care (welfare), and Counselling and Emergency Aid.

**49. PLAN — EMERGENCY WELFARE SERVICES
(provincial, zone, municipal)**

A detailed written account of the policies and procedures to be followed in setting up and operating the Emergency Welfare Services at each level.

50. PLANNING COMMITTEES — EMERGENCY WELFARE SERVICES

Committees composed of suitable community people, whose training and experience would assist a Director of Emergency Welfare Services and each of the five Chiefs of Services in planning and organizing.

51. PRE-ATTACK PHASE

This phase includes any period of deteriorating international relations up to the time of the National Alert Warning or the commencement of attack, whichever is first.

**52. READY STOCK — STOCK
RETURN FORM**

A two part form with a one-time carbon, used to record all the clothing on hand in Clothing Depots and Welfare Centres that has been sorted, sized, packed and marked.

53. RECEPTION AREA

The area beyond a target area into which people would evacuate in time of emergency.

54. RECEPTION BUREAU

One of the four bureaux of Personal Services. The function of this bureau is to receive evacuees at Welfare Centres and other reception points, to answer questions, to give reassurance, and to direct evacuees to appropriate emergency services.

55. RECEPTION COMMUNITY

A city, town, or village within a reception area, which would receive and care for evacuees in time of emergency.

56. RECOVERY PHASE

This phase includes the long time interval following the survival period when reconstruction and rehabilitation would be the primary considerations.

57. REFUGEE

A citizen of a foreign country, who arrives in Canada during an emergency.

58. REGISTRATION CARD

A two part card with a one-time carbon, on which information about evacuee families or individuals would be recorded so that inquiries about them could be answered.

**59. REGISTRATION AND
INQUIRY SERVICE**

One of the five Emergency Welfare Services. The two-fold function of this Service is to reunite as quickly as possible members of families separated by disaster, and to answer inquiries regarding the safety and whereabouts of persons.

60. REGISTRATION KITS

A carton containing 500 Registration Cards and the equipment required for the registration of evacuees.

**61. REQUISITION TO SUPPLY
OFFICER FORM —
EMERGENCY WELFARE
SERVICES**

A three part form with one-time carbon, which would be used by each of the five Emergency Welfare Services when requisitioning goods and equipment from the War Supply Agency or Municipal Supply Officer.

**62. SAFETY NOTIFICATION
POST CARD**

Post Office Form E-2, to be used by evacuees in a war emergency to advise others of their safety and present location.

63. SELF-HELP PREPARATIONS

Those preparations which individuals and families can make now for their own survival in case of emergency.

64. SEPARATED FAMILY

A family in which one or more members have become separated from the other family members by a disaster.

65. SHOCK PHASE

This phase includes the duration of the attack and the interval following until arrangements have been completed for the survival of the remaining population, with the government in control although using emergency powers. There are three periods during this phase: Attack Period; Life-Saving Period; Survival Period.

**66. SUPERVISOR —
EMERGENCY CLOTHING**

A qualified person appointed by the Municipal Chief of Emergency Clothing to carry out the operation of that Service in a Welfare Centre and the Welfare Centre Area.

**67. SUPERVISOR —
EMERGENCY FEEDING**

A qualified person appointed by the Municipal Chief of Emergency Feeding to carry out the operation of that Service in a Welfare Centre and the Welfare Centre Area.

**68. SUPERVISOR —
EMERGENCY LODGING**

A qualified person appointed by the Municipal Chief of Emergency Lodging to carry out the operation of that Service in a Welfare Centre and the Welfare Centre Area.

**69. SUPERVISOR —
PERSONAL SERVICES**

A qualified person appointed by the Municipal Chief of Personal Services to carry out the operation of that Service in a Welfare Centre and the Welfare Centre Area.

**70. SUPERVISOR —
REGISTRATION & INQUIRY**

A qualified person appointed by the Municipal Chief of Registration & Inquiry to carry out the operation of that Service in a Welfare Centre and the Welfare Centre Area.

71. SUPPORTING SERVICES

A term indicating a service given to or required from EWS.

72. THREE DAY SURVIVAL KIT

A kit consisting of one pound of candy (any kind except chocolate), a 20 ounce can of juice, and a can opener. It is recommended as a self-help measure for survival in an emergency when no other source of food and liquid is available.

**73. UNATTACHED CHILDREN
AND DEPENDENT ADULTS
BUREAU**

One of the four bureaux of Personal Services. The function of this bureau is to care for children and dependent adults separated from their families.

74. WELFARE CENTRE

The building or group of buildings within a Welfare Centre Area from which the Emergency Welfare Services will be administered and provided.

75. WELFARE CENTRE AREA

The geographic area within a reception community for which a specific Welfare Centre is responsible.

**76. WELFARE CENTRE
MANAGER**

The person who is responsible for the organization and operation of Emergency Welfare Services in a Welfare Centre and its Welfare Centre Area.

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